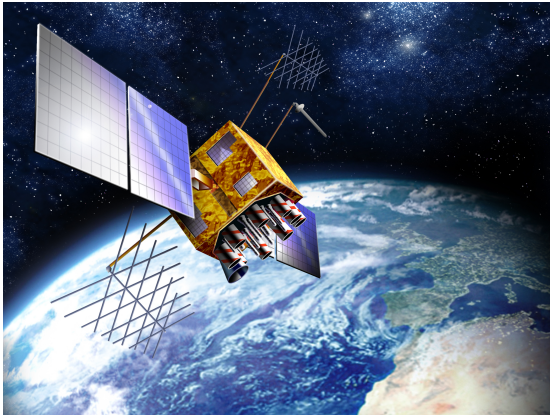


Boyce Industries Pty Ltd



# RevViewer User Guide

Version: 1.9.5

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## Introduction

## Copyright and Licensing



### RevViewer

Distributed by Boyce Industries Pty Ltd

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## General Introduction

Welcome to the Reveloc system from Boyce Industries.

Boyce Industries provides both customised and off-the-shelf style software and mapping solutions for tracking vehicles fitted with a GPS and appropriate communications hardware.

The system provides basic functionality that allows one or more vehicles to be tracked on one or more maps via a continuous polling or position on demand mechanism.

You should be generally familiar with the use of Microsoft Windows XP (or later) and some database / networking knowledge may be required if you are wanting to install / maintain the system without assistance.

This User Manual will detail the various operational functions of the client side of the Reveloc system. In order to use the RevViewer software you should already have a server configured with the Reveloc Administrator software.

As an overview, the User Manual is broadly divided into the following:

[Installation](#)

[Getting Started](#)

[Configuring RevViewer](#)

[Setting Up Maps \(Workspaces\)](#)

[Map Manager](#)

[Vehicle Manager](#)

[Job Dispatch](#)

[Display Summarys](#)

[Track Analysis](#)



## **Registration**

Reveloc uses a floating license model where the RevAdmin application controls the number of concurrent RevViewer connections. Consequently there is no need for registering installations of RevViewer separately. Of course, what this also means is that RevViewer can not be run without a valid instance of RevAdmin to connect to.

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## Getting Started

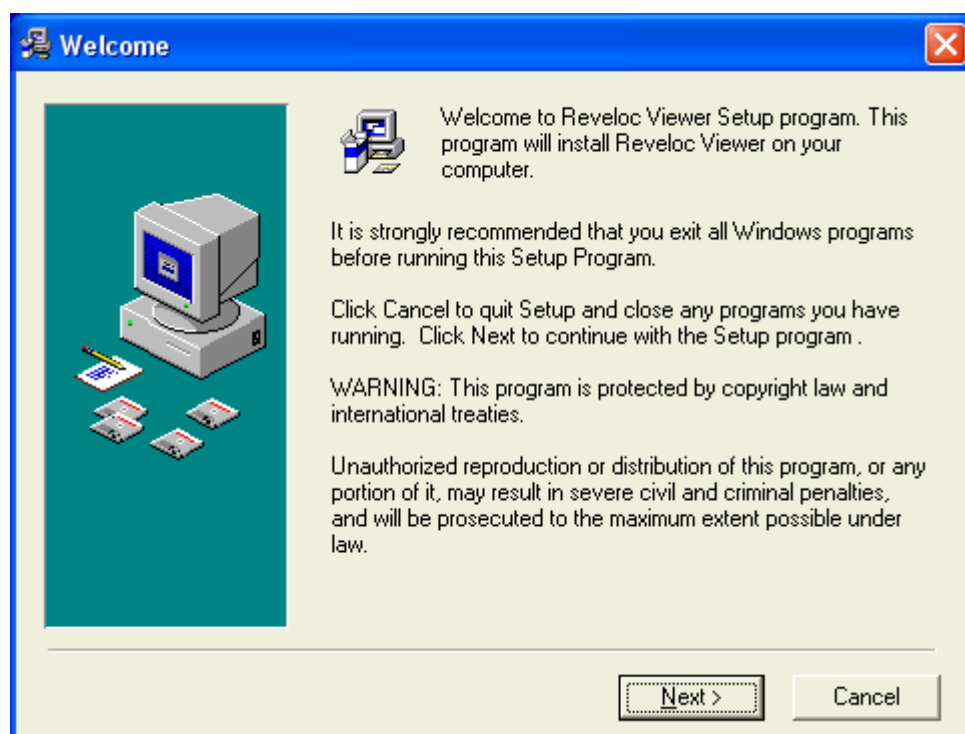
## Installation

1. Insert the supplied CD-ROM into the CD-ROM drive.
2. Double click on My Computer, select the appropriate Drive letter (e.g. F) and open the drive.
3. Select the RevViewer-Setup-1.9.5.x.exe icon and double-click to activate the install mechanism.

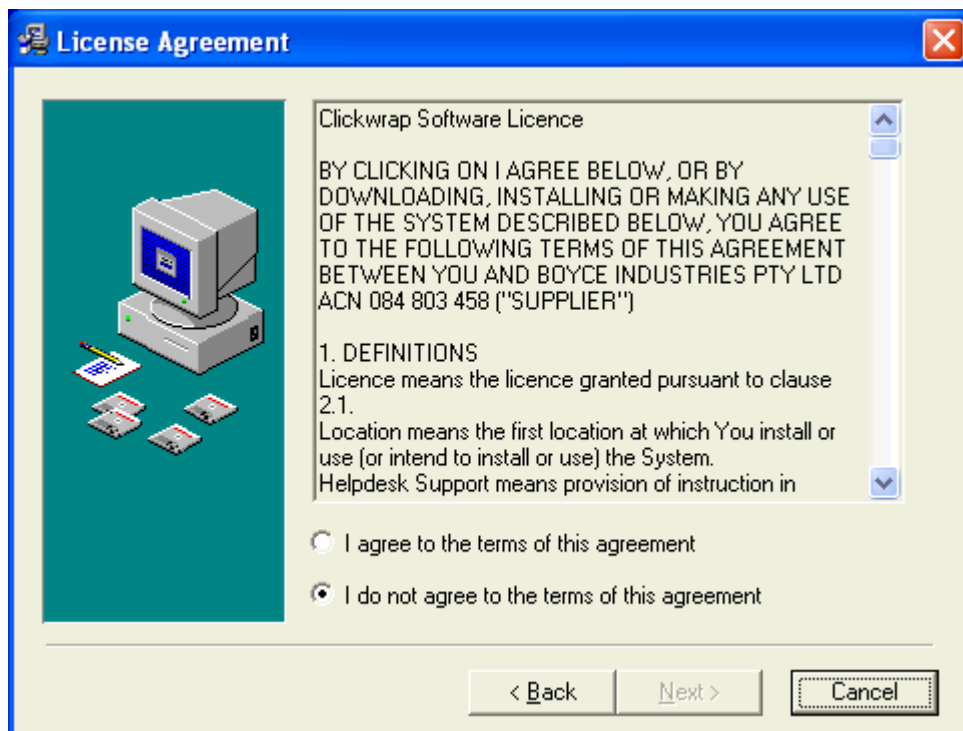


The install program will prompt you through a series of 'Typical' install dialogue screens.

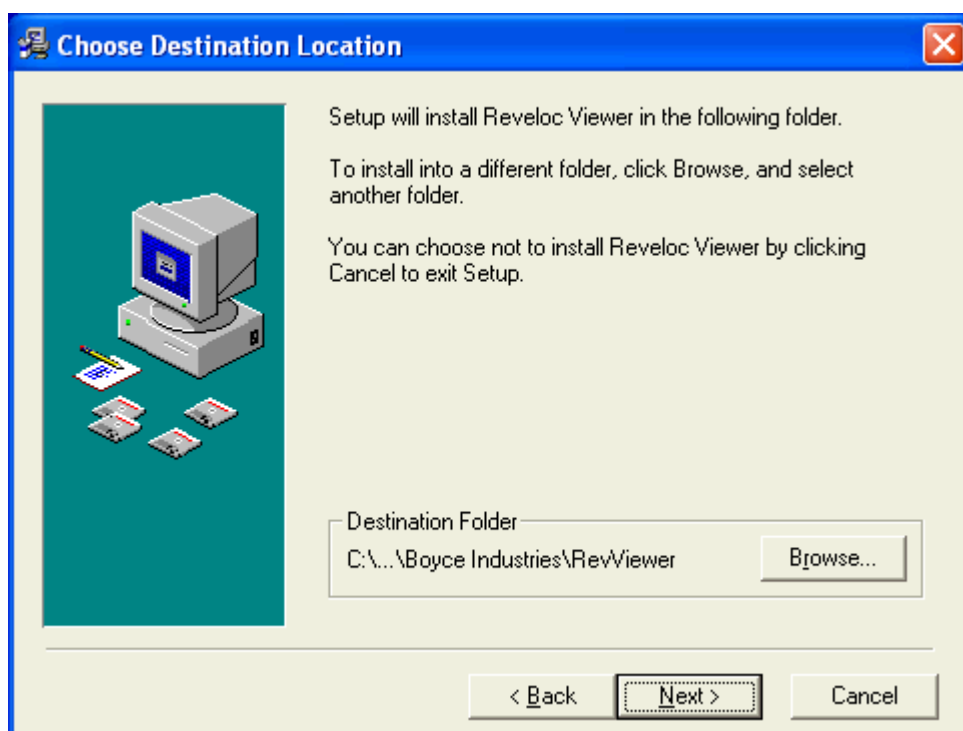
Select **Next** to proceed or **Cancel** to quit the installation procedure.



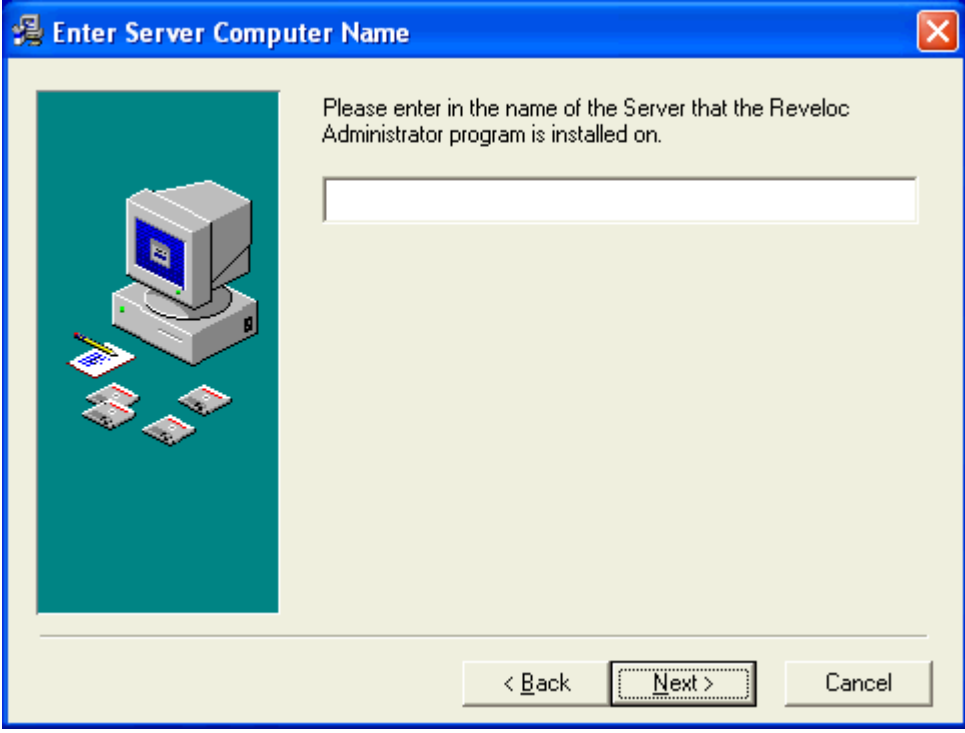
Please read the License Agreement carefully, select the **I agree...** option if you accept the terms and click **Next** to continue.



Now select the folder where the RevViewer application should be installed and click **Next**.

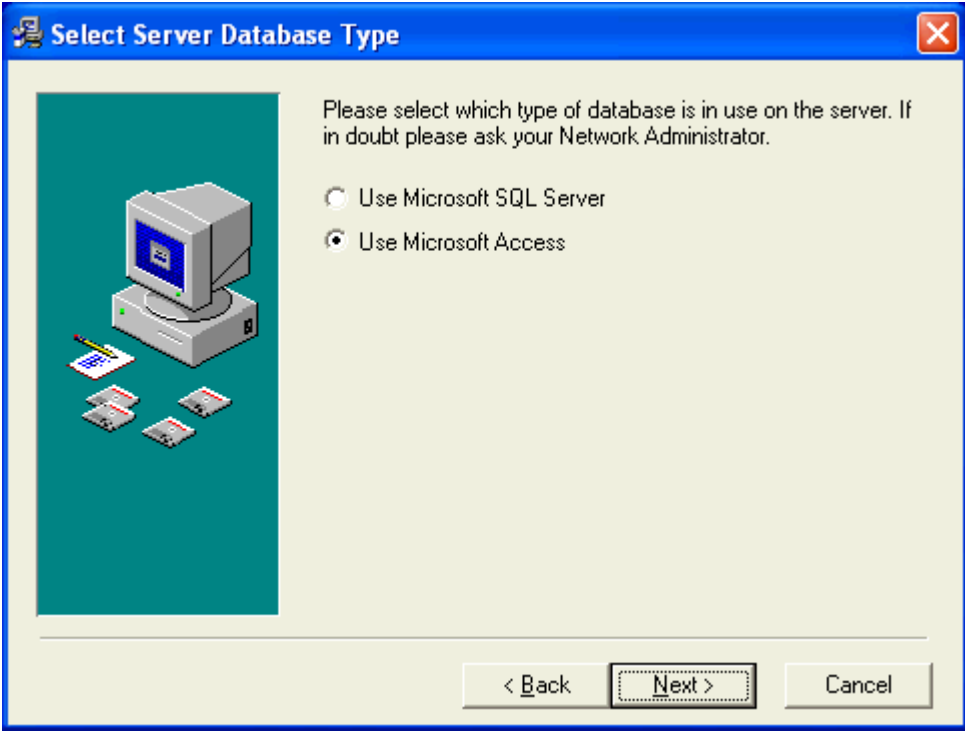


Enter either the Computer Name or the IP Address of the computer that has the Reveloc Administrator program running on it and click **Next**.



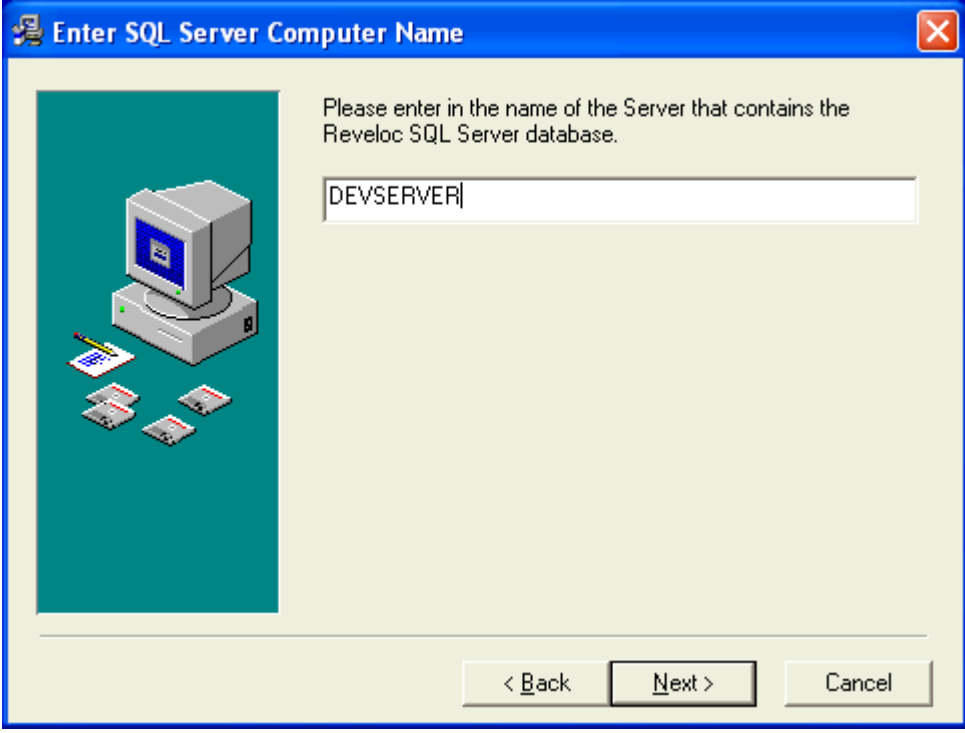
The dialog box has a blue title bar with the text "Enter Server Computer Name" and a close button (X) in the top right corner. On the left, there is a teal rectangular area containing a 3D illustration of a computer monitor on a base, with several floppy disks and a pen scattered around it. To the right of this area, the text reads: "Please enter in the name of the Server that the Reveloc Administrator program is installed on." Below this text is a single-line text input field. At the bottom of the dialog, there are three buttons: "< Back", "Next >" (which is highlighted with a dashed border), and "Cancel".

Select the type of database you are using. This should match what was used when installing the Reveloc Administrator. If you do not know which option was used please contact your system administrator. If you choose Microsoft Access then you can skip the next two steps.



The dialog box has a blue title bar with the text "Select Server Database Type" and a close button (X) in the top right corner. On the left, there is a teal rectangular area containing a 3D illustration of a computer monitor on a base, with several floppy disks and a pen scattered around it. To the right of this area, the text reads: "Please select which type of database is in use on the server. If in doubt please ask your Network Administrator." Below this text are two radio button options: "Use Microsoft SQL Server" and "Use Microsoft Access". The "Use Microsoft Access" option is selected, indicated by a filled circle. At the bottom of the dialog, there are three buttons: "< Back", "Next >" (which is highlighted with a dashed border), and "Cancel".

If you opted to use Microsoft SQL Server then enter the Name or IP Address of the computer running the database. By default, the installer uses the same value entered for the Reveloc Administrator computer.



**Enter SQL Server Computer Name**

Please enter in the name of the Server that contains the Reveloc SQL Server database.

DEVSERVER

< Back   Next >   Cancel

The dialog box features a blue title bar with a computer icon and a red close button. On the left, there is a teal rectangular area containing a 3D illustration of a computer monitor, a tower unit, and several floppy disks. The main area is light beige with instructional text and a text input field containing 'DEVSERVER'. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

Once you have entered the name of the SQL Server instance you will need to select the type of authentication you wish to use. Windows NT authentication will use the currently logged in user's network account when trying to access the database. SQL Server authentication requires the user to supply a User Name and Password when first connecting to the RevServer database.



**Select Server Authentication Type**

Please select the type of authentication you are using. If you select SQL Server Authentication you will be given the opportunity to enter your username and password when the program is first run.

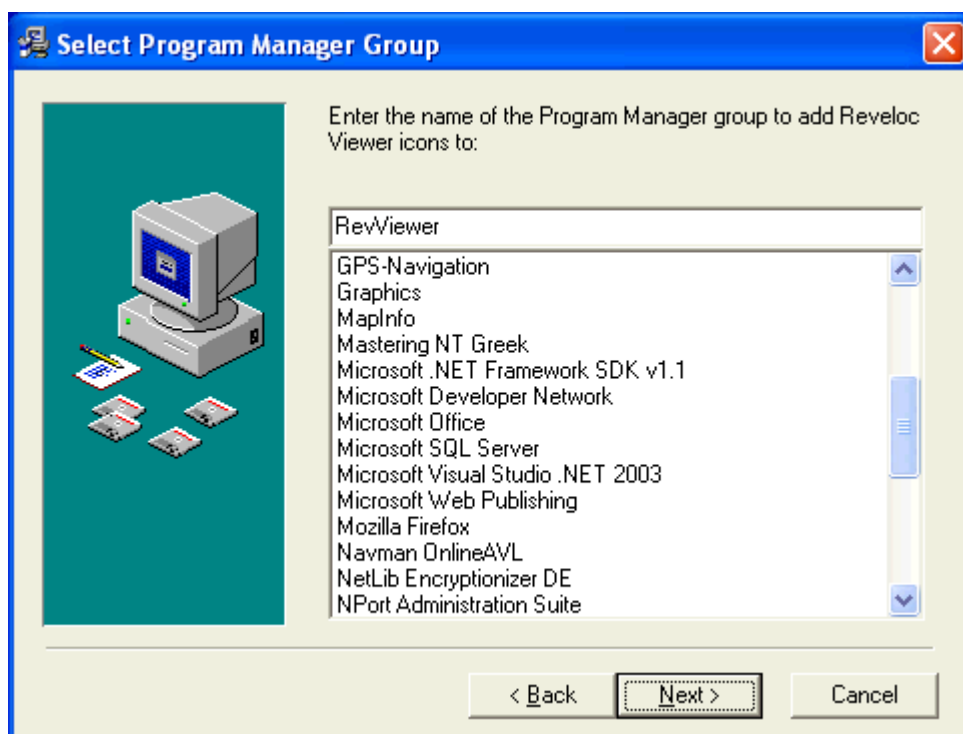
☐ Use Windows NT Authentication

☒ Use SQL Server Authentication

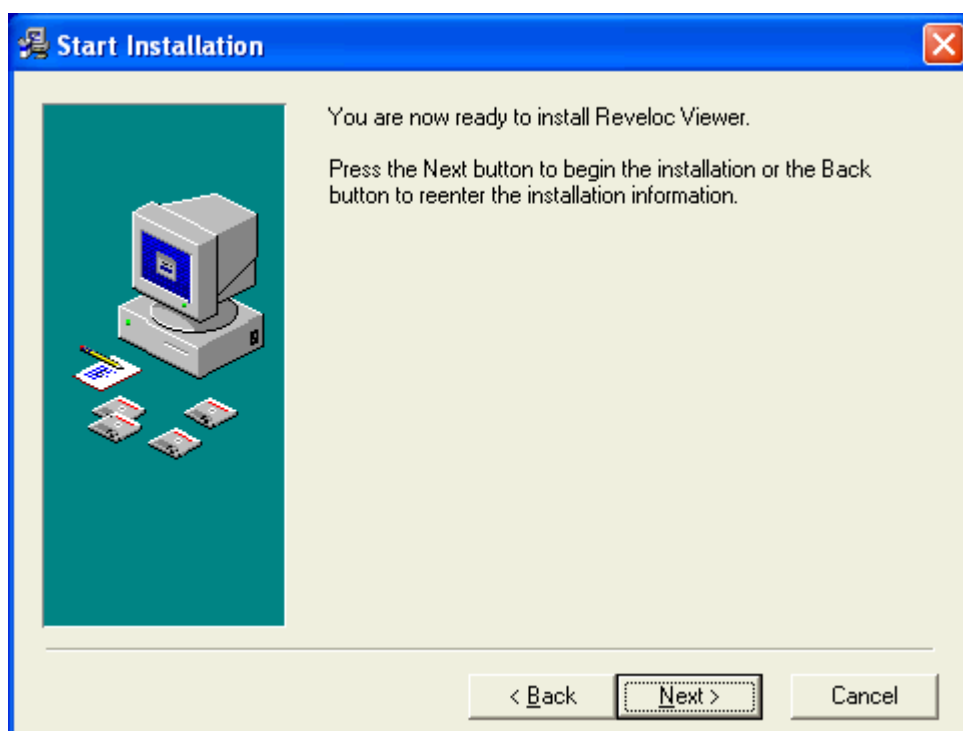
< Back   Next >   Cancel

This dialog box has a similar layout to the previous one, with a blue title bar, a computer icon, and a red close button. The left teal area contains the same 3D computer and floppy disk illustration. The main beige area contains instructional text and two radio button options. The 'Use SQL Server Authentication' option is selected. At the bottom, the buttons are '< Back', 'Next >', and 'Cancel'.

Enter in the name of the Program Manager Group you want to install the RevViewer icons under and click **Next**.



That's it! Click on **Next** to start the installation. Once everything has been completed you will be prompted to restart the computer.



## Main Screen

To bring up the main screen, activate Reveloc Viewer by:

- 

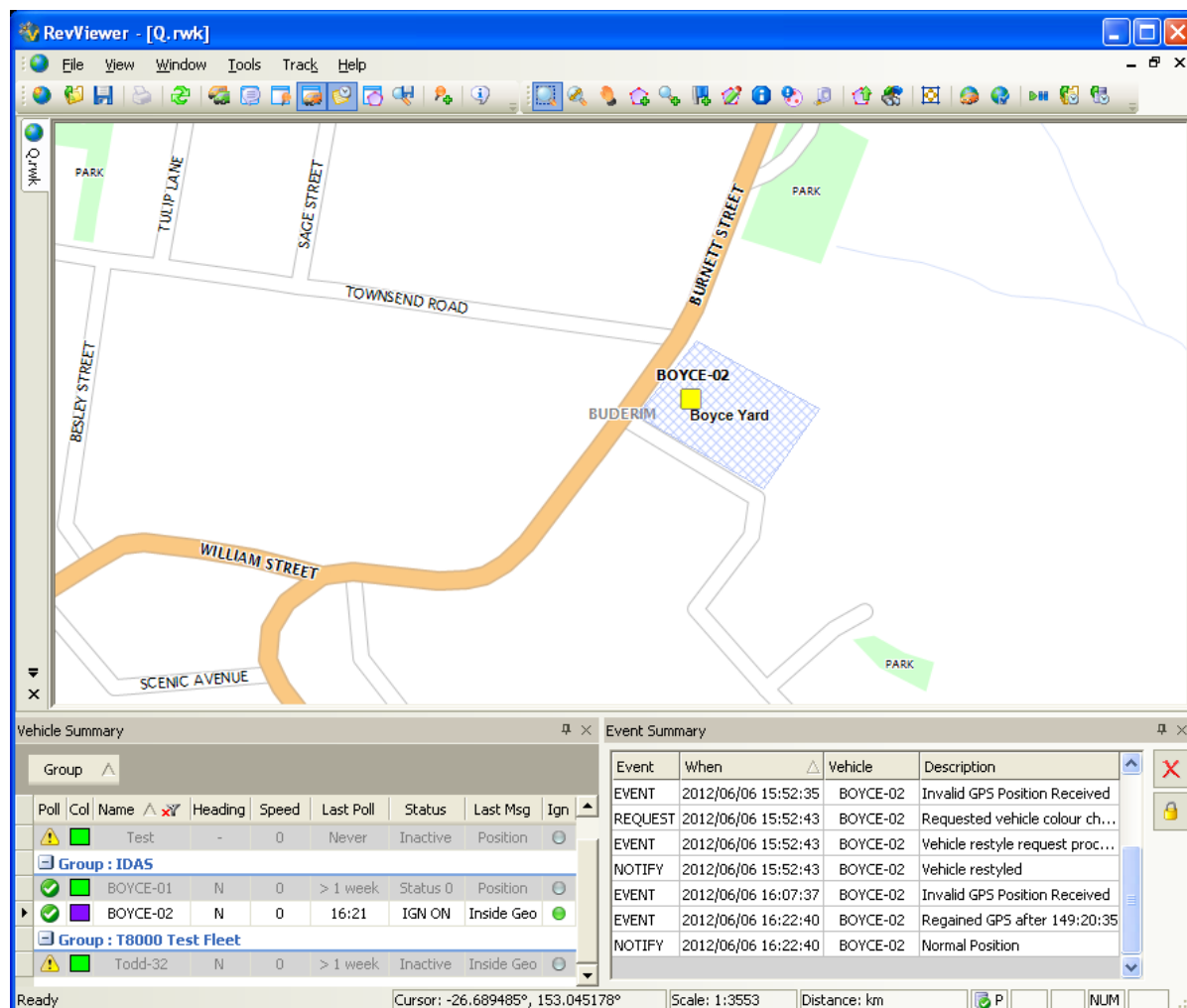


Reveloc

Double clicking on the Viewer desktop Icon or

- Clicking on the Start button, selecting **Programs** then **Boyce Industries** and selecting the Reveloc Viewer item.

This will activate the software and present the Main screen from which all functions are activated.





## Main Toolbar



The Main Toolbar is always visible (and usually docked) and contains the following buttons.



The **New Workspace** button allows the user to create a new mapping workspace for displaying track data on.



The **Open Workspace** button allows the user to browse for a Reveloc Workspace (rwk) file to open.



The **Save** button allows the user to save the underlying layer settings for the currently active workspace.



The **Print** button allows the currently active map screen to be printed. This will only be enabled if there is a map open.



The **Refresh** button does an immediate refresh of Job Summary and Vehicle position information.



The **Fleet Manager** button brings up the **Fleet Manager** window for adding / editing vehicle details.



The **Message Summary** button brings up the **Message** window containing all outstanding message / polling requests for certain types of device.



The **Job Summary** button brings up the **Job Summary** window that contains a list of all outstanding, unallocated jobs.



The **Vehicle Summary** button brings up the **Vehicle Summary** window that gives an overview of each vehicle in the poll list.



The **Event Summary** button brings up the **Event Summary** window that displays a list of "events" that have occurred since program commencement.



The **Geofence Summary** button brings up the window that displays a list of the geofences that are stored in the database.



The **Preset Zoom Summary** button brings up the window that displays a list of user defined map boundaries.



The **Place Job** button brings up a window so that information for a new job can be entered and submitted.



The **About** button brings up a window that displays version and build information for the currently installed instance of Reveloc.



- Move** Left click on the point to be moved and drag it to the new location.
- Insert** Left click on the section of the boundary that you want the point inserted into and drag the vertex to its appropriate location.
- Remove** Double click on an existing point to delete it from the geofence boundary.
- Editing can be finished by right clicking which will popup a window with geofence / feature information that can also be edited if desired.
- Features can be deleted by clicking on them and hitting the Delete key.



The **Information** tool allows the user to view position information for a vehicle if a track point is at the selected location and / or any attribute information for objects at that geographic location.

Information	
Field	Value
- Layer : QLD_ROAD	
ROADNAME	ESPLANADE
ROADTYPE	303
SURFACET...	3
GROUNDRE...	4
LOCALITY_1	TOOGOOM
LOCALITY_2	GOODNA



The **Vehicles At Location** tool can be used to display a list (in the Information Window) of all vehicles at a particular location. This is handy in situations where several vehicles are all in close proximity of each other and can't all be labelled clearly. The tool allows a centre point to be clicked and the mouse then dragged out to define a circular region. All vehicles falling within the circle will be included in the Information list.



The **Measure** tool allows distances between map locations to be calculated by clicking on subsequent points on the map.



The **Upload Geofences** button provides a mechanism for uploading geofence boundaries from an appropriately formatted file into the geofence database.



The **Find Street** button allows a street and suburb combination to be entered. Once an exact match is identified, the map will be zoomed to this location.



The **Fit** button allows you to zoom back out to the entire extent of the current workspace eg Brisbane, North America, world.



The **Map Manager** button is used to show / hide a list of vehicles that are currently associated with a particular map.



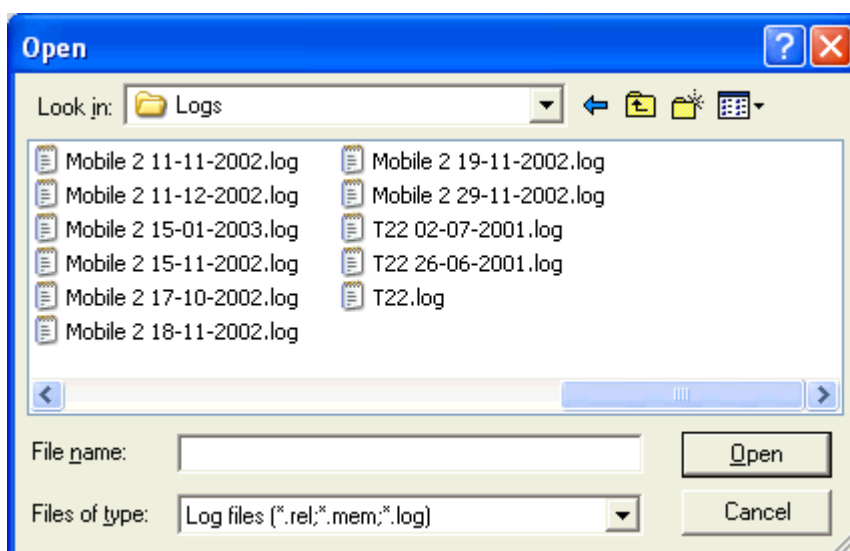
The **Legend** button is used to activate a map's Legend panel which is used to control how mapping information is displayed on screen. Layers can be added and removed or even reordered by selecting the layer from the list and clicking on the appropriate button. Properties for a layer can also be modified. Refer to [Setting Up Maps](#)



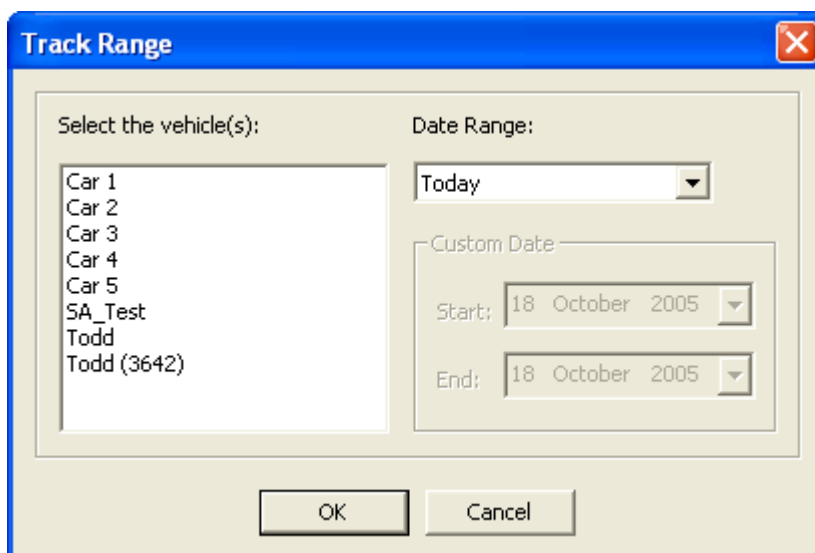
The **Replay Control** button activates the Replay Controller screen, used to replay previously stored or logged tracking points. Refer to [Replay Controller](#)



The **Load Replay** button allows the user to retrieve a file containing previously logged 'track' data. Once the Load Replay button has been pressed, the system will display an Open dialogue box, allowing the selection of a specific file for retrieval.



The **Load Track from Database** button allows the user to retrieve historical data for one or more vehicles. Once the button has been pressed it will display a dialog similar to the following:



Simply select one or more vehicles and an appropriate date range then click on **OK** to load the data.

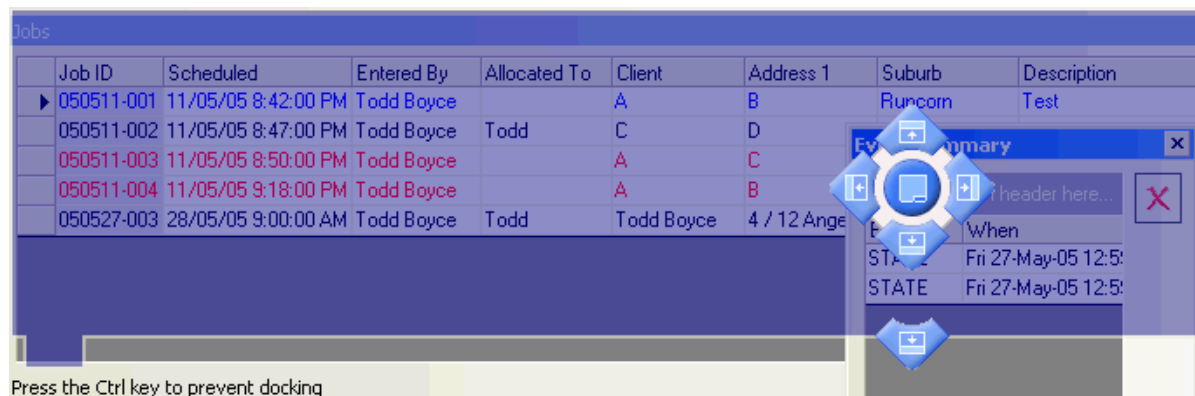
## Docking Windows

A number of Reveloc Viewer's controller windows can be "docked" to the frame of the main window. These include:

- Vehicle Manager
- View Manager
- Information Window
- Replay Controller
- Job Summary
- Event Summary
- Vehicle Summary

In order to change a window's docking position, click and hold down the left mouse button in the appropriate window's Title bar and start to move the window. A number of docking control helpers will appear on the screen. As you move the window onto one of these it will highlight the portion of the screen where the window will be docked if you release the left mouse button.

Some windows also allow you to dock the window over the top of an existing one. A new tab will be added to the window when this occurs. To do this, simply use the centre part of the control (if available). An example showing the Event Summary window about to be docked as a tab in the Job Summary window is illustrated below.



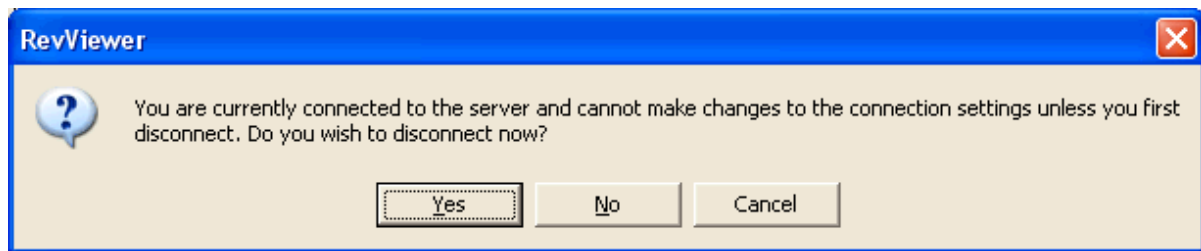
Although the docking mechanism is quite sophisticated it is also relatively easy to use so feel free to experiment a little in order to get the "perfect" layout for maximum productivity.

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# Configuring RevViewer

## Connection Options

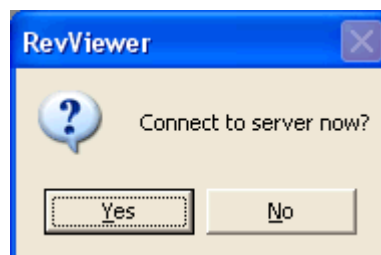
The Connection Options window can be accessed from the **Connection Options...** item on the **Tools** menu. If you select the Connection Options item when a connection to the server is already open, you will be asked if you wish to close it.



The window has three Tabs, which are explained in the following two sections:

- [General Tab](#)
- [Primary & Secondary Tabs](#)

Once you have entered in the appropriate information click on **OK**. You will then be prompted with a window asking if you want to make a connection to the server then and there.

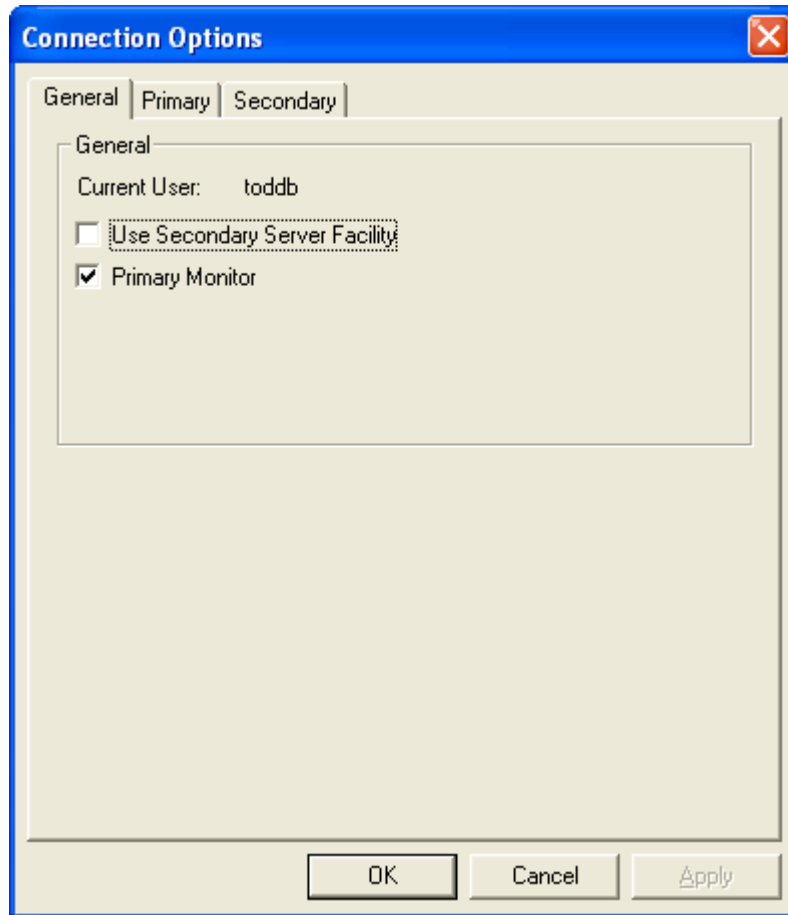


If you do wish to try and establish the connection with the new settings then click on **Yes**, otherwise click **No**.

Notes:

1. Once you have entered in the appropriate connections settings, RevViewer will automatically use them next time the program is started.
2. An event item will be added to the Event Summary window for each successful connection / disconnection.

## General Tab



The General tab displays the name of the user that is currently logged in and has two checkbox options:

<b>Use Secondary Server Facility</b>	If RevViewer is required to connect to a second copy of RevAdmin for redundancy purposes then tick this box.
<b>Primary Monitor</b>	If ticked, RevViewer will sound the Emergency Alert and flash an orange screen if the connection to the Primary server is lost. (see <a href="#">Emergency Alerts</a> section for configuring the audio file to use)



## Primary & Secondary Tabs

The Primary and Secondary tabs are identical and broken up into two sections.

### Local Settings

#### Allocate Local Port Automatically

Tick this box if you want RevViewer to automatically assign a port for the duration of the session. If this box is cleared, then a **Local Port** number will need to be set.

#### Local Port

Port number to use for connections to the server. This field is disabled if the **Allocate Local Port Automatically** option is ticked (recommended).

### Server Settings

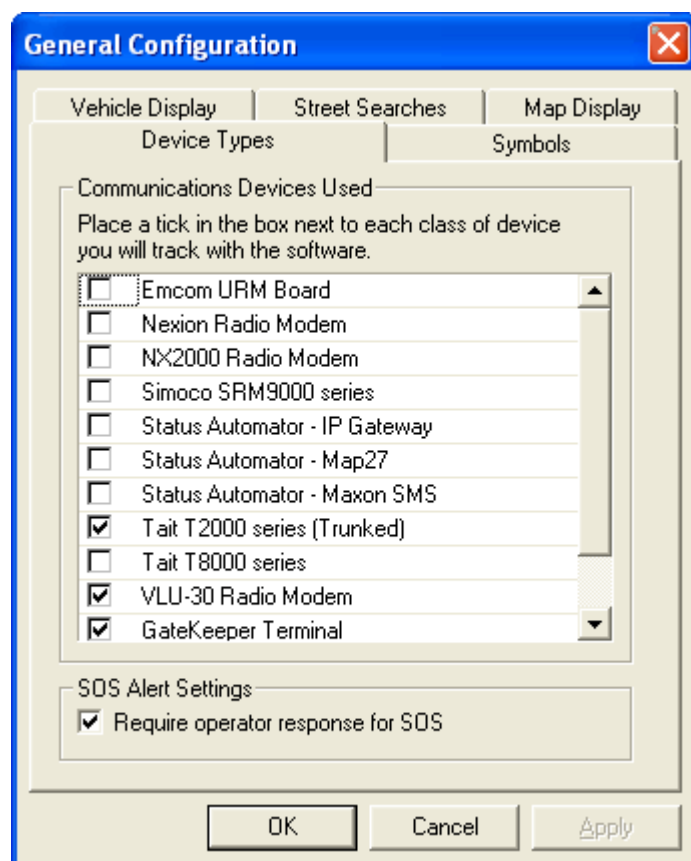
<b>Server Address</b>	Name of the Server PC that RevAdmin is running on.
<b>Server Port</b>	The port that the Server PC is listening on for connections.
<b>Use SQL Server</b>	Tick this box if you are using Microsoft SQL Server.
<b>SQL Server</b>	If used, the instance name of the SQL Server database (typically just the name of the PC SQL Server is running on).
<b>Log on information</b>	Select the type of authentication to use when connecting to the RevServer database. If not using Windows NT integrated security then a User Name and Password will need to be supplied.
<b>Database Location</b>	If not using SQL Server (ie. using Microsoft Access) then this field should contain the full path to the RevServer.mdb database file. The easiest way to select this is via the ... button to the right of the edit field.

Unless a redundant server system is being used, the Secondary tab should have all of its fields left blank.

## General Configuration

The General Configuration window can be accessed from the **General Configuration...** item on the **Tools** menu.

## Device Types



The Device Types tab is split into two sections:

### Communications Devices Used

Tick the box for each type of device you want to be made available for viewing / monitoring. Please note that any changes to these settings will require the RevViewer program to be restarted in order to ensure correct functioning of the application.

### SOS Alert Settings

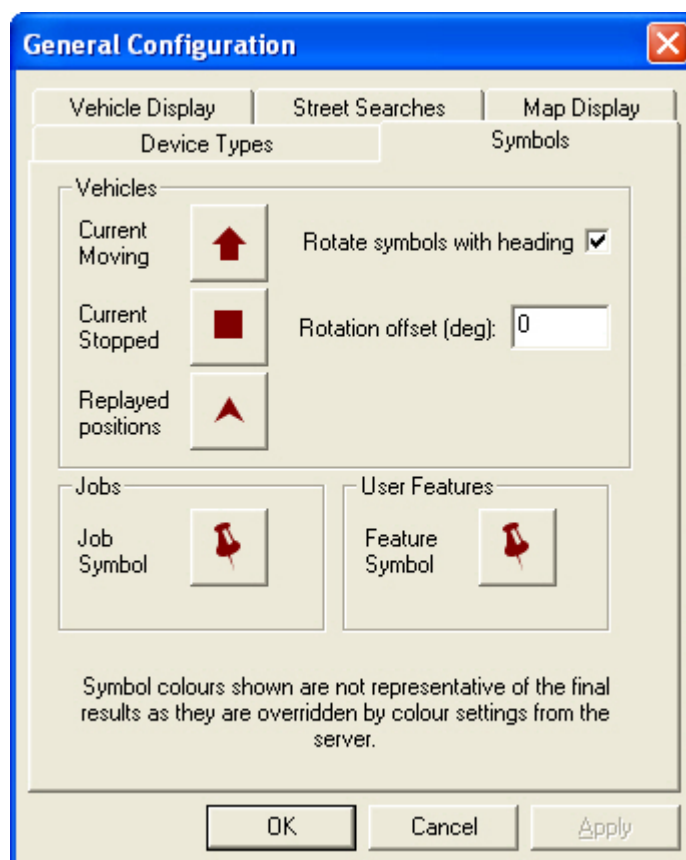
Ticking the Require operator response for SOS box will result in the following behaviour when an SOS alert is received:

1. Flashing red screen with alerting vehicles details and location.
2. Audible alarm sounded (if set).
3. Emergency Procedure document displayed when flashing screen is cleared (if set).

Please see the [Emergency Alerts](#) section for details on configuring the audible alarm and Emergency Procedure document.

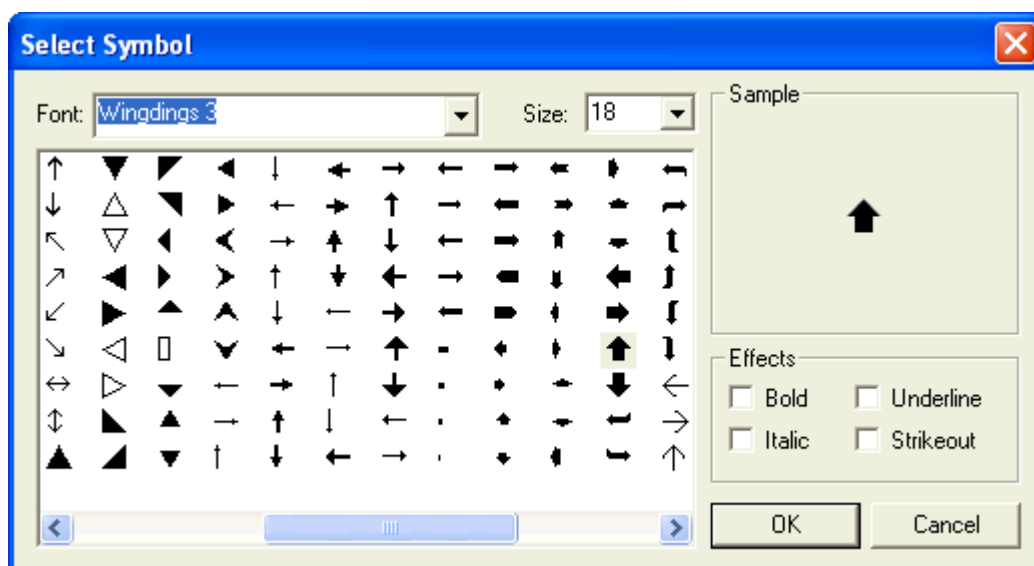
## Symbols

The Symbols section of the General Configuration window allows the user to customise the display of on screen job and vehicle positions.



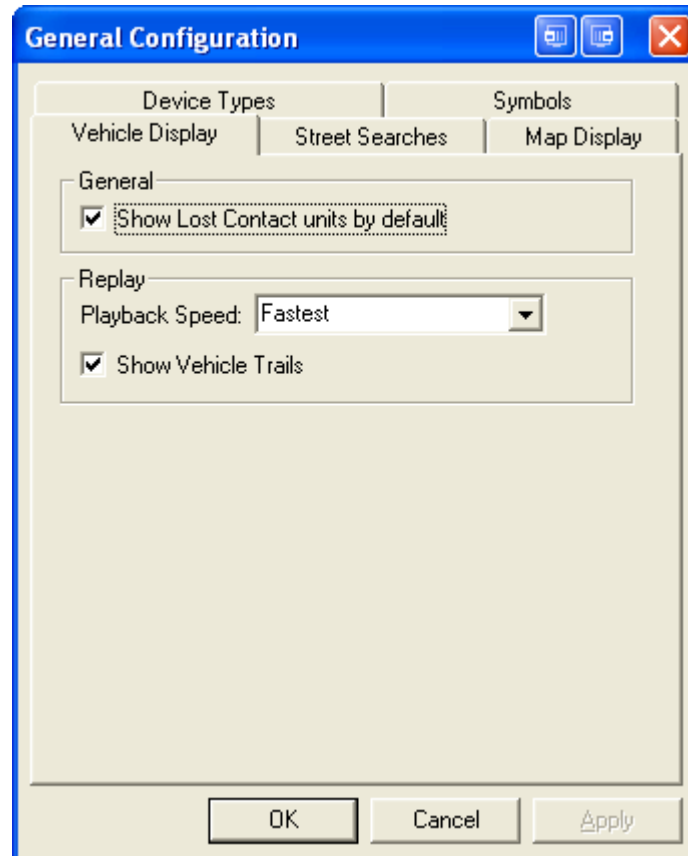
- Current Moving**      Symbol to display for all "current" vehicle positions where the vehicle is moving.
- Current Stopped**      Symbol to display for all "current" vehicle positions where the vehicle is stopped.
- Replayed Positions**      Symbol to display for all historical vehicle track points.
- Rotate Symbols...**      Tick this box if you wish the given "current" symbol to be rotated in accordance with the vehicle's heading.
- Rotation Offset**      Number of degrees to initially rotate the symbol by to reflect a Northerly heading.
- Job Symbol**      Symbol to display on the map for current jobs.
- Feature Symbol**      Symbol used for displaying user entered features.

Clicking on a Symbol button will bring up the Symbol Style window similar to the one below:



As indicated in the dialog box the colours of the symbols are irrelevant as this information is retrieved from the server.

## Vehicle Display



The **Vehicle Display** section allows a couple of vehicle display related settings to be modified.

**Show Lost Contact Vehicles**

If unticked only vehicles that are currently active will be displayed in open map windows.

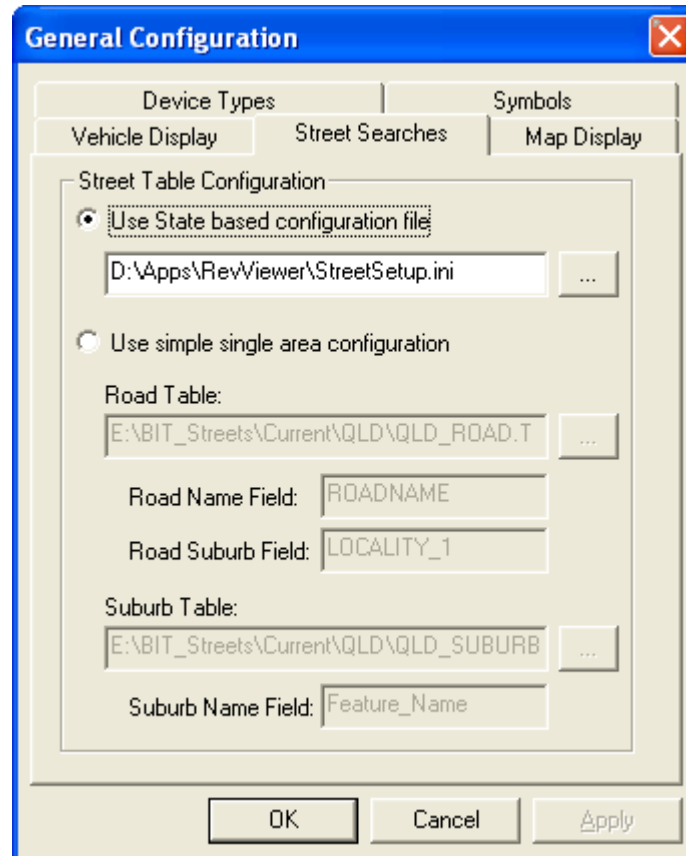
**Playback Speed**

Determines the rate at which points will be displayed when using the automatic playback facility of the Replay Controller.

**Vehicle Trails**

If ticked all vehicle positions for the active session will be displayed, otherwise only the current position of each vehicle will be displayed when in Replay mode.

## Street Searches



The **Street Searches** section needs to be set up in order to facilitate RevViewer's **Find Street** functionality.

**State Based Config** Use this option if you have road and suburb information split up into multiple areas (eg by State).

**Road Table** Name of the street / road layer that will be searched.

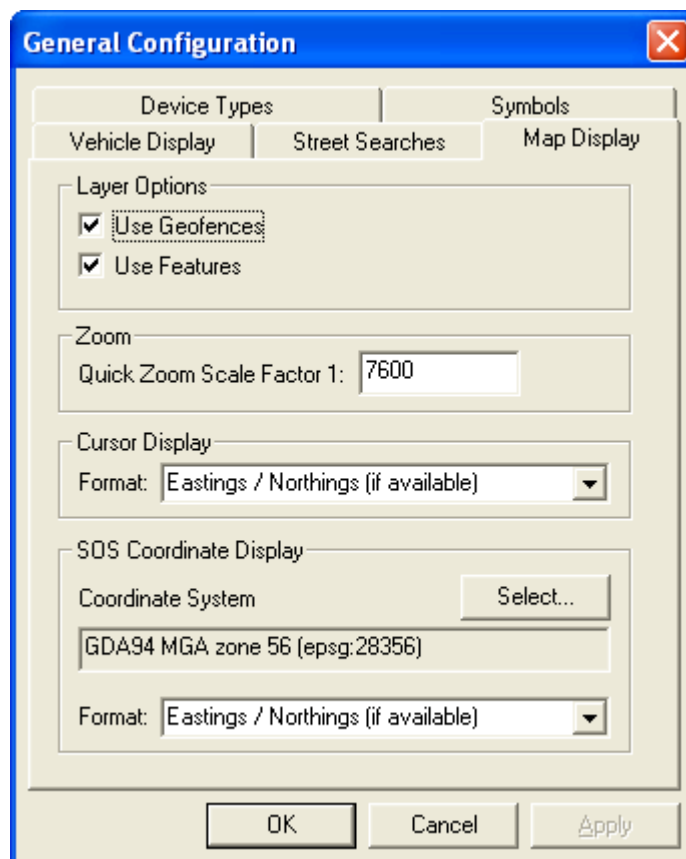
**Road Name Field** Name of the field in the **Road Table** that contains the Street's name.

**Road Suburb Field** Name of the field in the **Road Table** that contains the appropriate suburb (if present).

**Suburb Table** Name of the layer that contains Suburbs for use in refining the street search.

**Suburb Name Field** Name of the field in the **Suburb Table** that contains the Suburb's name.

## Map Display



### Use Geofences

Tick this box if the Geofence layer is to be displayed on each map.

### Use Features

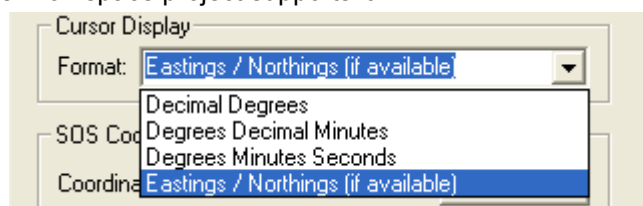
Tick this box if the User Features layer is to be displayed on each map.

### Quick Zoom Scale

Scale factor to use when selecting Quick Zoom from the View menu.

### Cursor Display

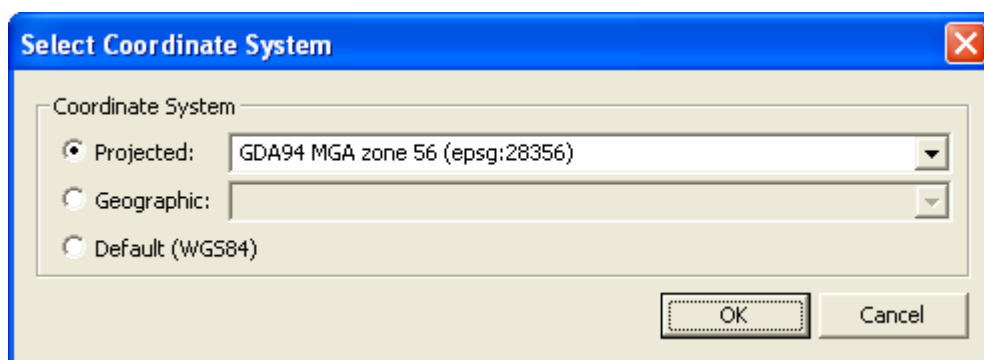
Format to use in the status bar for the cursor position. The Eastings / Northings option will display metres based information if the underlying coordinate system used by the high level workspace project supports it.



### SOS Coordinate Display

Coordinate System and coordinate display format for use on the flashing SOS Alert screen. Pressing the Select... button will bring up the window below from which the appropriate Coordinate System can be selected.





## External File Configuration

The Street Setup file format mentioned in the Street Searches section is broken into three main areas: Fields, Files and State Details.

```
[FIELDS]
LocalityTableLocality=LOCALITY_NAME
RoadTableStreet=STREET_NAME
RoadTableLocality=LOCALITY
[FILES]
NumStateFiles=2
State1=NSW
State2=QLD
[State: NSW]
RoadTable=C:\Program Files\Boyce Industries\RevAdmin\MapData\NSW\NSW_ROAD.tab
LocalityTable=C:\Program Files\Boyce Industries\RevAdmin\MapData\NSW\NSW_LOCALITY.tab
[State: QLD]
RoadTable=C:\Program Files\Boyce Industries\RevAdmin\MapData\QLD\QLD_ROAD.tab
LocalityTable=C:\Program Files\Boyce Industries\RevAdmin\MapData\QLD\QLD_LOCALITY.tab
```

### Fields Section

This area contains three entries corresponding to the field names that will be looked up in the various mapping layers.

<b>LocalityTableLocality</b>	Field in the Locality Table(s) that contains the name of the locality.
<b>RoadTableStreet</b>	Field in the Road Table(s) that contains the name of the street.
<b>RoadTableLocality</b>	Field in the Road Table(s) that contains the name of the locality.

### Files Section

<b>NumStateFiles</b>	Number of separate state files to be loaded for street / locality searching
<b>StateX</b>	Contains the value corresponding to the field that is returned for a state from the Country layer (as used in the State section below).

### State Section(s)

For each state that vehicles are going to be operating in, a separate section needs to be set up with section headings as follows:

[State: *State Name*]

where *State Name* corresponds to the entry in the Country table. Each section then needs to have two entries: **RoadTable** and **LocalityTable** which specify the location of the Road and Locality layers respectively.

**Please note that all files must be in a MapInfo / ESRI shape vector format.**


## Setting Up Maps (Workspaces)

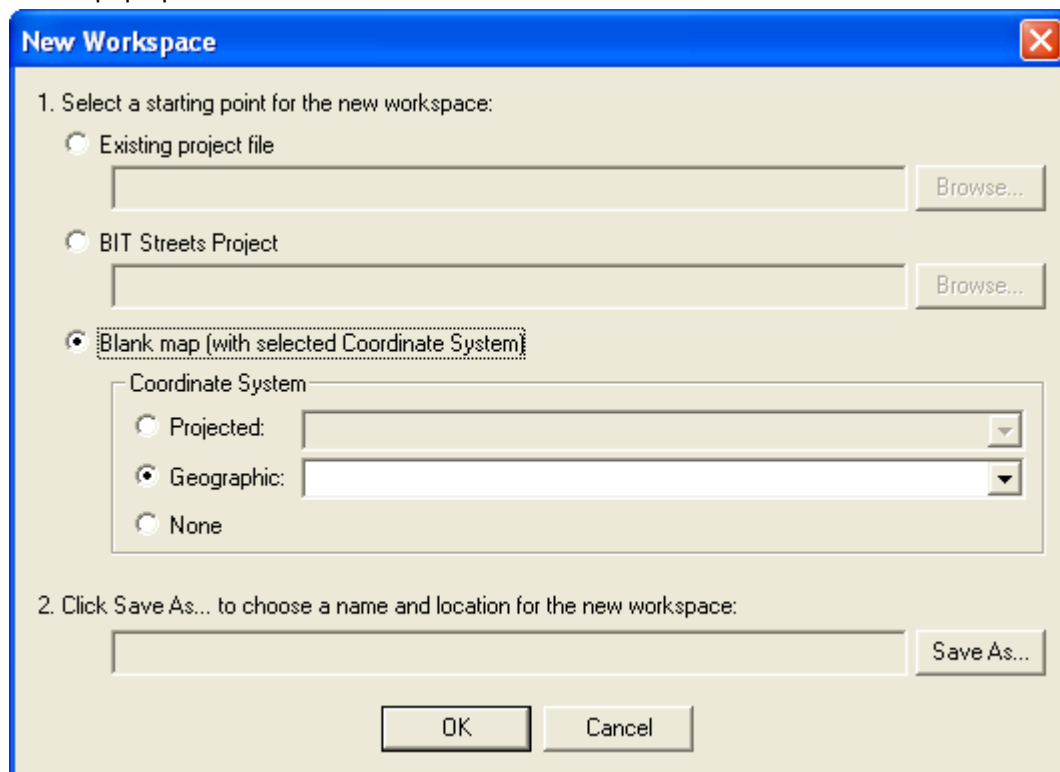
## Creating A New Workspace

In RevViewer, mapping workspaces are generally built around a Tatuk project file. By default these files have a .ttkpg extension. The project file contains information about which layers are to be displayed and when as well as the presentation style of geographical objects within the individual layers. Project files can be created using the free Tatuk GIS Viewer software available for download from the Tatuk GIS web site or they can be created from within RevViewer itself.

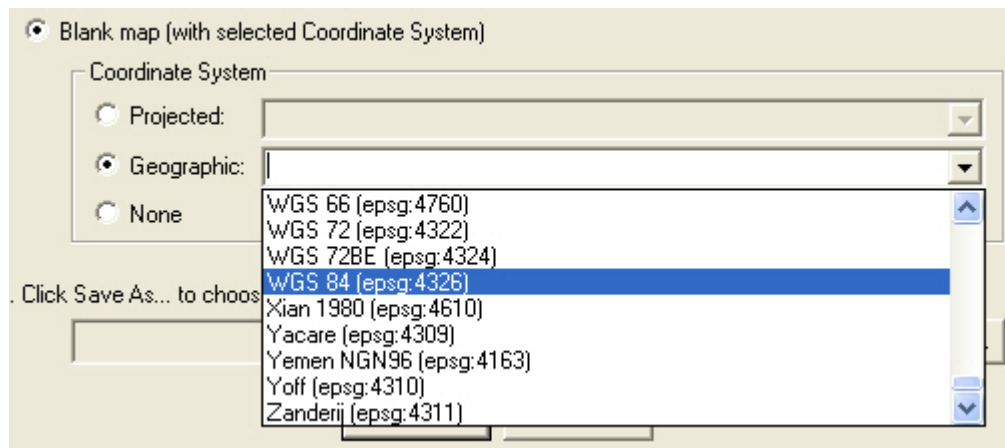
BITStreets data (for Australian users) is stored in a .bitsts file and if available can be selected using the third option of the New Workspace window. This option also has an accompanying project file so that other layers can be used in conjunction with the BITStreets data eg. OSM derived POI layers.

If you want to create a "new" workspace (from scratch) within RevViewer follow the steps below:

1. Select the **New** from the File menu or the  from the Main Toolbar. A window similar to the one below should pop up.

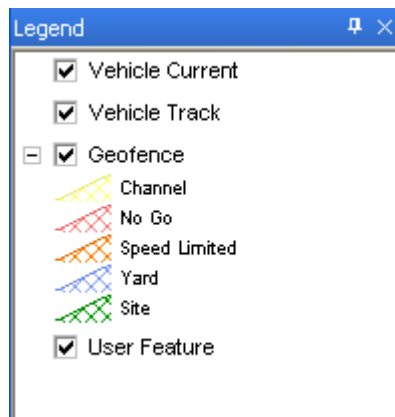


2. Select the Blank Map option
3. Select the type of Coordinate System that corresponds with your mapping data.
4. Click on the appropriate dropdown to open a list of options for the selected system type (see below). As a guide, if your data contains coordinates with Eastings and Northings you should choose something from the **Projected** list and if it has latitudes and longitudes you should choose one from the **Geographic** list.

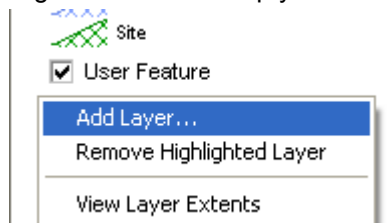


5. Click the **Save As...** button in and select a filename and location to save the new workspace to.
6. Click on **OK**.

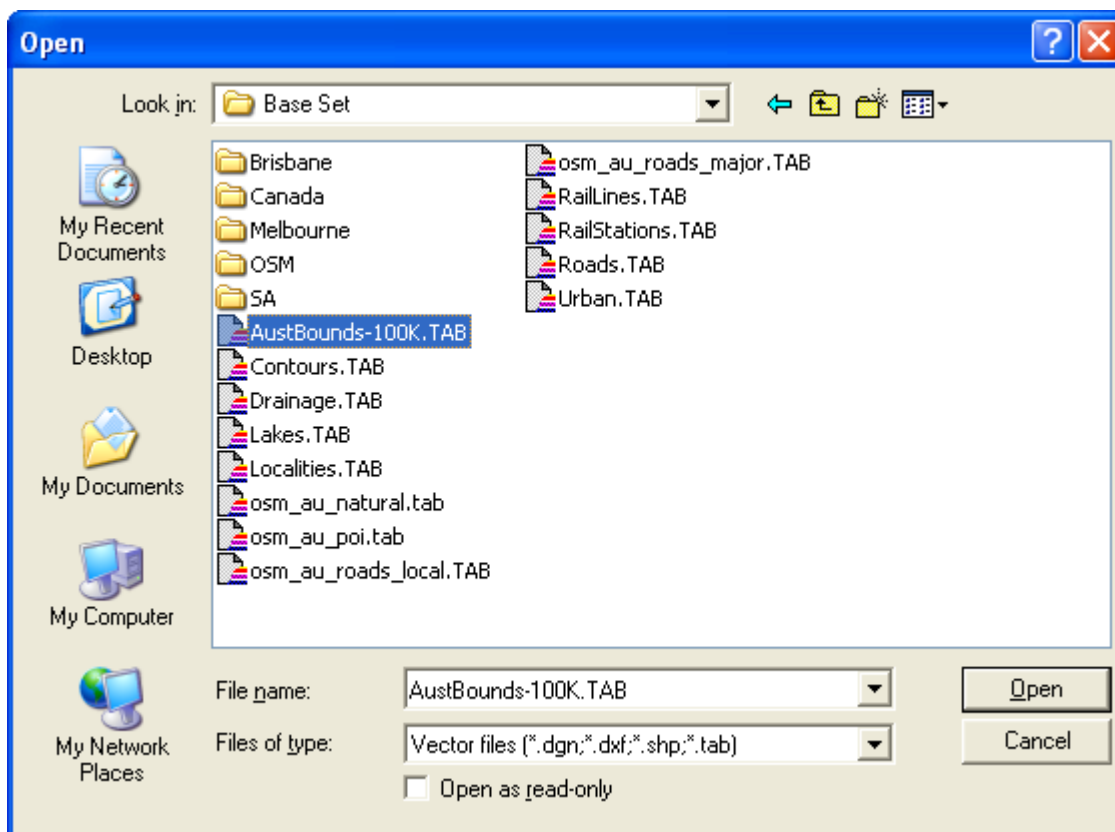
You should now see a blank map window with an empty Map Manager panel (in Replay mode) and a Legend panel with several default layers as illustrated below.



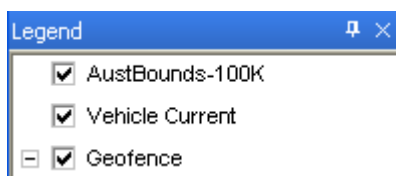
7. Right click on the empty area of the Legend panel and select the Add Layer... menu item.



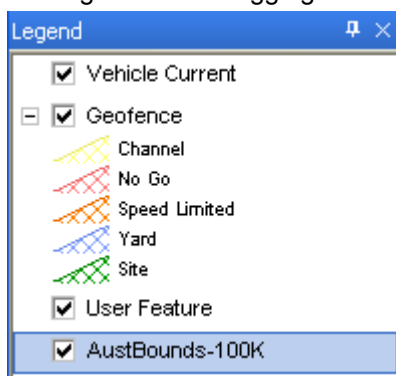
8. You should now see a standard File Open dialog similar to the one shown below:



Browse for the layer you wish to add using the above window and then click Open to add it to the Legend. The list of currently supported vector formats include: Microstation dgn, AutoCAD dxf, ESRI shp and MapInfo tab. In addition the following raster file formats are also supported: ecw, jpg and tif. After you have selected the layer, an entry with its name will appear in the Legend panel and the layer will be added to the map.



9. Continue to add layers as required.
10. By default layers are added to the top of the Legend. Typically though you will want the Vehicle Current layer (that holds the current position of each vehicle) to be at the top. It can be moved back here by simply clicking on it and dragging it over the top of (or even above) the topmost entry in the list.



11. Once you have finished adding layers, click on the Save item of the File menu or the Save button on the toolbar.

Information on how to configure the display of objects in individual layers can be found in the next section.

## **Configuring Layer Properties**

Each layer has a number of properties that can be configured to customise the overall appearance of the maps used in RevViewer. Changes to layer properties are only stored in the underlying map project (ttkpg) file. The underlying map data is not altered in any way.

Layer properties can be viewed / maintained by double clicking on the appropriate layer in the Legend panel. The Properties window has a number of Tabs for adjusting various aspects of the layer display. Each is explained in a section to follow.

Note: Some details have been copied directly from the Tatuk Viewer help file.



---

## Layer Tab

The *Layer - Parameters* tab provides provides the following settings / fields:

<b>Path</b>	The path to the file containing the selected layer.
<b>Name</b>	The name of the file containing the selected layer.
<b>Caption</b>	The name for the layer as it is displayed in the Legend panel.
<b>Projection</b>	The geographic coordinate system of the selected layer (currently inactive)
<b>Cached Paint</b>	Tick if cached layer painting is required. Cached painting means that all drawing is done off screen first and then the map image displayed up on completion. This helps improve performance and reduce screen flicker. Leaving the option unticked will mean that the repaint will be seen on a vector by vector basis.
<b>Incremental Paint</b>	Tick if incremental layer painting is required. The mapping engine currently renders a map in two phases. The first, 'draft' phase, essentially draws all simple vector geometry while the second phase draws the final presentation features like charts, labels and complex fill styles. If incremental painting is turned on only the first phase is performed when the map is being moved with the second being performed once movement has stopped long enough for the rendering process to be completed. It is recommended that this box be ticked for large or complex layers.
<b>Labels On Top</b>	Tick to force labels to be drawn on top of all map layers in the project.
<b>Transparency</b>	Value in the range 0 to 100. A value of 0 corresponds to full transparency ie. invisible, while a value of 100 corresponds to no transparency (ie. full visibility). It may be better to think of this value as an Opacity percentage.
<b>Addition</b>	Value in the range of 0 to 100 that determines the degree to which the background colour of the layer is added to the colour of the objects in it. (useful for viewing anaglyphs)

**Vector: BNE\_ROAD**

Layer | Section | Renderer | Line | Area | Marker | Label

Parameters | Info

Path  
E:\BIT\_Streets\2007-02\QLD\Brisbane\BNE\_ROAD.TAB

Name  
BNE\_ROAD

Caption  
BNE\_ROAD

Projection  
Select

☒ Cached Paint ☒ Labels on top  
☐ Incremental Paint

Transparency  
100

Addition  
0

OK  
Apply  
Cancel  
Wizard ...

The *Layer - Info* tab provides information about the format of the layer, a field for user comments about the layer and CodePage options for situations requiring a translation between language character sets eg. Greek, Cyrillic, Arabic etc.

The screenshot shows a software dialog box titled "Vector: BNE\_ROAD". It has a blue title bar and a light beige background. At the top, there is a tabbed interface with tabs for "Layer", "Section", "Renderer", "Line", "Area", "Marker", and "Label". The "Info" tab is currently selected. Below the tabs, there are three main sections: "File informations" with a text box containing "MapInfo Native Format (TAB/MAPI)", "User comments" with a larger empty text box, and a section for "From CodePage" (1252) and "To CodePage" (1250). On the right side, there are three buttons: "OK", "Apply", and "Cancel". At the bottom right, there is a "Wizard ..." button.

If the layer is a raster image, the File Information box will display the number of pixels in each row / columns and the number of colour bits used by the image.

---

## Section Tab

One rendering strategy is to use the settings under the Section tab to segment the contents of the map layer into sections defined by attribute query statements and/or scale ranges (zoom levels). The parts of the map layer defined by each section then be rendered in specific ways at specified scale levels or not rendered at all some specified scale levels. (This is one way to control map clutter, such as by turning off certain map feature or labels at given zoom levels.) Attribute query statements are defined in the Render if match query field and the visible scale range is set with the Minimum scale and Maximum scale settings. The formulas for each defined section are listed at the bottom of the Section tab.

If sections are not used, all the content of the map layer will be contained by a single section named 'Visible'.

<b>Visible</b>	If unchecked, shape visibility will be turned off in accordance with the parameters specified by the selection in the section list in the lower part of the window.
<b>Minimum Scale</b>	The minimum scale level (ie. zoomed out) for the section selected in the section list. Use the Current button to fill with the current map's scale level.
<b>Maximum Scale</b>	The maximum scale level (ie. zoomed in) for the section selected in the section list. Use the Current button to fill with the current map's scale level.
<b>Render if match query</b>	If desired enter a query to define the selected section. Format is similar to an SQL WHERE clause. All shapes matching the query will be rendered according to other settings in the properties window.
<b>Legend</b>	Enter the name that will appear in the legend when the selected section is rendered.
<b>Ignore shape parameters</b>	Gives the option of ignoring any internal visual parameters that might be stored within the map file itself. As is possible with CAD oriented file formats like DXF, DGN or TAB.

**Vector: BNE\_ROAD**

Layer Section **Renderer** Line Area Marker Label

☒ Visible

Minimum scale Maximum scale

Current X 1:75000 Current X 1:10000

Render if match query (must be logical)

HIERARCHY\_CODE = 302 OR HIERARCHY\_CODE = 303

Legend

Arterial

+ Visible Scale[ 1:10000.. ] Query[ HIERARCHY\_CODE = 301 ]

- Visible Scale[ 1:10000.. ] Query[ HIERARCHY\_CODE = 302 OR HIE

X Visible Scale[ 1:10000.. ] Query[ HIERARCHY\_CODE = 304 ]

Visible Scale[ 1:10000.. ] Query[ HIERARCHY\_CODE = 305 ]

Visible Scale[ 1:75000..1:10000 ] Query[ HIERARCHY\_CODE = 301

Visible Scale[ 1:75000..1:10000 ] Query[ HIERARCHY\_CODE = 302

Visible Scale[ 1:1000000..1:75000 ] Query[ HIERARCHY\_CODE = 30

☒ Ignore shape parameters

OK Apply Cancel Wizard ...

A number of sections have been defined in the above example - the point of which is to display the various items of road hierarchy in different styles at different zoom levels.

## Renderer Tab

Another rendering strategy is to render by dividing continuous values contained by a selected attribute into a number of zones using the Renderer tab settings. The Renderer tab provides the following settings:

<b>Number of Zones</b>	The number of zones (ranges) into which the attribute values will be divided when rendering the map.
<b>Minimum Value</b>	The starting (lowest) value in the lowest zone. Shapes with an attribute value less than this will be rendered in the <i>Default</i> colour
<b>Maximum Value</b>	The final (highest) value in the highest zone. Shapes with an attribute value higher than this will be rendered in the <i>Default</i> colour
<b>Start Color</b>	Colour that the lowest (first) zone will be rendered with.
<b>End Color</b>	Colour that the highest (last) zone will be rendered with.
<b>Default Color</b>	Colour for shapes with attribute values that fall outside of the minimum and maximum zones.
<b>Start Size</b>	Size to be used for rendering the lowest zone be it for points, line widths, outlines etc. (can be set in terms of points or pixels)
<b>End Size</b>	Size to be used for rendering the highest zone be it for points, line widths, outlines etc. (can be set in terms of points or pixels)
<b>Default Size</b>	Size for shapes with attribute values that fall outside of the minimum and maximum zones.
<b>Render Expression</b>	Allows the selection of a set of attributes on which the rendering will be based. The field allows a numeric formula to be specified such as to express the sum of the values contained by two or more attributes or even averaging the value of multiple attributes.
<b>Round</b>	Entering a positive value determines the number of places to the right of the decimal point that figures are presented in when shown in the Legend panel. Negative values determine the number of places to the left of the decimal point that are to be displayed.

**Vector: BNE\_ROAD**

Layer | Section | **Renderer** | Line | Area | Marker | Label

First | Second

Number of zones: 0 Minimum value: 0 Maximum value: 0

Start color: End color: Default color:

Start size: 0.1pt End size: 24.0pt Default size: 6.0pt

Render Expression (must be numeric): Bound: 0

+ Visible Scale[ 1:10000.. ] Query[ HIERARCHY\_CODE = 301 ]  
 - Visible Scale[ 1:10000.. ] Query[ HIERARCHY\_CODE = 302 OR HIE  
 Visible Scale[ 1:10000.. ] Query[ HIERARCHY\_CODE = 304 ]  
 Visible Scale[ 1:10000.. ] Query[ HIERARCHY\_CODE = 305 ]  
 Visible Scale[ 1:75000..1:10000 ] Query[ HIERARCHY\_CODE = 301  
 Visible Scale[ 1:75000..1:10000 ] Query[ HIERARCHY\_CODE = 302  
 Visible Scale[ 1:1000000..1:75000 ] Query[ HIERARCHY\_CODE = 30

☒ Ignore shape parameters

OK Apply Cancel Wizard ...

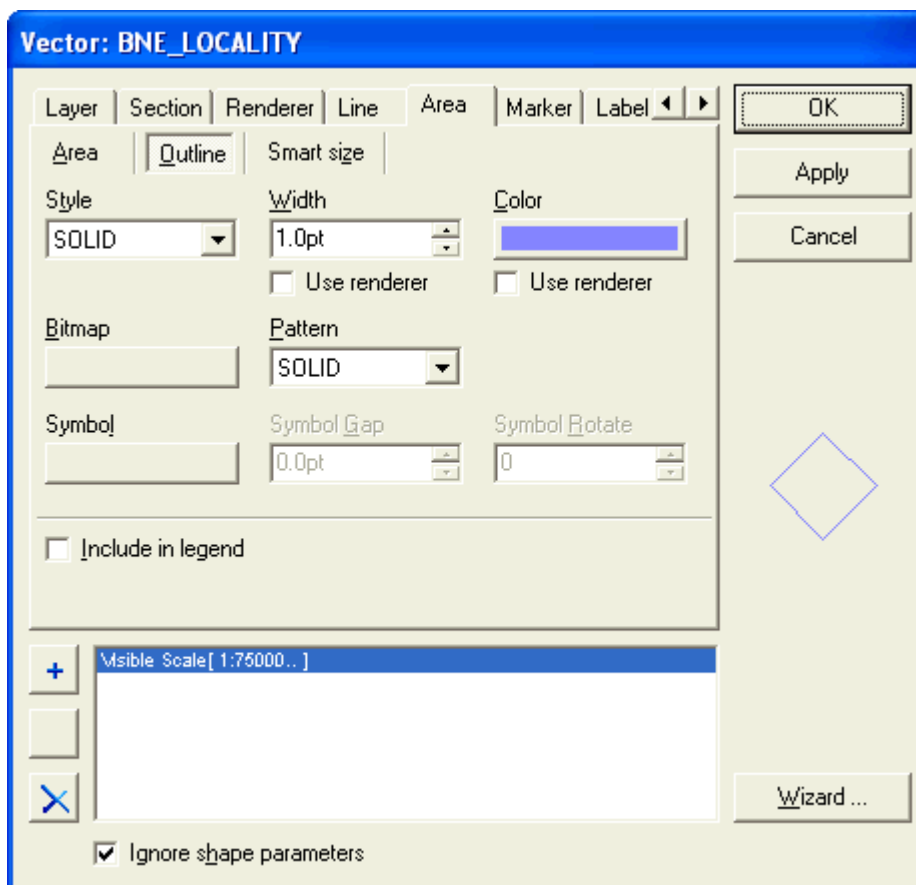
The Wizard button which appears at the bottom of the Renderer tab and other tabs within the layer properties control, opens the Rendering Wizard window. The Wizard provides time saving short cuts to much more quickly render a vector map layer based on the unique values or value ranges of a selected attribute. One short cut is that the Wizard automatically determines the minimum and maximum values necessary to include all the shapes in the layer.

## Area, Line & Marker Tabs

The Area tab provides the settings to control how the sections defined in the Section tab or the zones defined in the Renderer tab are to be rendered on the map. If the selected layer is of a type that contains only line shapes, this tab is titled Line. If the layer is a point or multi-point layer, the tab is titled Marker. Similarly if the layer only contains polygons then an Area tab will be presented. The setting options are similar with each geometric type, but a bit different to reflect the geometric differences. For example, in a line layer a symbol would be rendered repeatedly to represent the line feature, whereas in a points layer the symbol would be rendered one time for each point. CAD style DXF or DGN files can contain vector polygons, lines, and points all in a single map file (layer). Therefore, if the selected layer contains a DXF or DGN file, the visual layer property window can contain all three tabs - Area, Line, and Marker.

If the Use renderer check box is not checked (as in the image below) the rendering will be based on the settings in the Section tab. The Area tab provides settings to apply a color to each of the sections as listed at the bottom of the window. The settings in this tab also control the use of patterns within polygons, the widths and colors of polygon outlines, use of a repeating symbol as a polygon fill, use of symbols to represent polygon outlines, etc. If symbols are used to fill the polygons (or to represent lines), the Symbol Gap, Symbol Rotate, and Symbol Size settings control the spacing between the symbol repetitions, the rotation each incidence of the symbol, and the size (in points; 1 point = 1/72 inch) of each incidence of the symbol. The Include in legend check box, if checked, makes a small representation of the rendered symbol appear in the Legend panel under the name of that layer.

If the Use renderer box is checked, the settings in the Renderer tab are used to render the colors and/or sizes.



The Area/Smart size sub tab provides access to the Smart size feature. This important layer property sets a size threshold for the rendering of shape features in the layer. Shapes smaller than the Smart Size at any given zoom level (scale level) are not rendered. With very large vector file layers, use of the Smart Size feature can dramatically speed up the opening of vector map files and the rendering speed at relatively zoomed out extent levels. This is because the software does not have to waste computational resources to render objects which



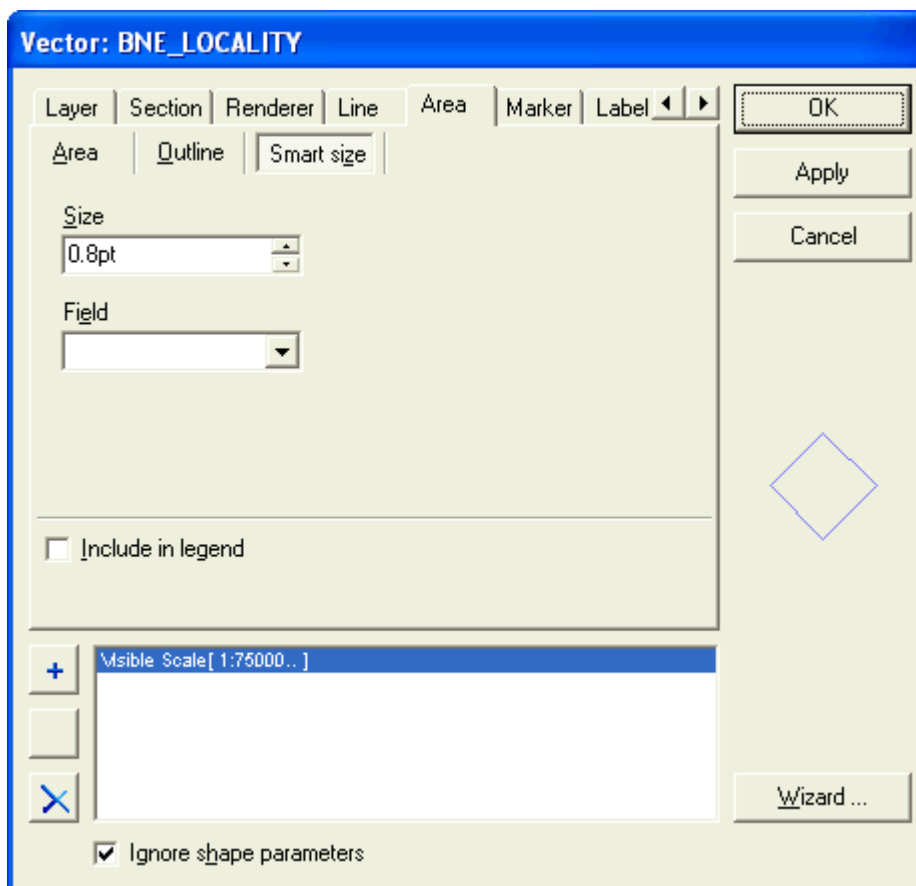
are too small at a given zoom level to meaningfully affect the map view. In some situations use of the Smart Size feature can enhance the map view by reducing clutter.

### Smart Size

Used to set the Smart Size in terms of points (pt) or pixels (px). A commonly used Smart Size setting is 1 pixel (1px), which results in any line or polygon shape in the layer that, would be rendered with a size of less than one full pixel at the present zoom level (scale), not being rendered at all. Naturally the Smart Size feature is more meaningful for polygon and line layers, since point shapes do not have a size. The Smart size feature can be turned off by setting the size to 0.0.

### Field

In the event that shapes are to be rendered by size based on values contained by one of the attributes, this attribute can be selected from the drop down menu in this field.

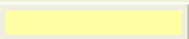


A customised sample of the Line and Marker tabs are shown below:


**Vector: BNE\_ROAD**

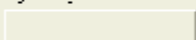
Layer Section Renderer Line Area Marker Label

Line Outline Smart size

Style: SOLID Width: 4.0pt Color: 

☐ Use renderer ☐ Use renderer

Bitmap:  Pattern: SOLID


Symbol:  Symbol Gap: 0.0pt Symbol Rotate: 0

☒ Include in legend

Visible Scale[ 1:10000.. ] Query[ HIERARCHY\_CODE = 301 ]  
 Visible Scale[ 1:10000.. ] Query[ HIERARCHY\_CODE = 302 OR HIE  
 Visible Scale[ 1:10000.. ] Query[ HIERARCHY\_CODE = 304 ]  
 Visible Scale[ 1:10000.. ] Query[ HIERARCHY\_CODE = 305 ]  
 Visible Scale[ 1:75000..1:10000 ] Query[ HIERARCHY\_CODE = 301  
 Visible Scale[ 1:75000..1:10000 ] Query[ HIERARCHY\_CODE = 302  
 Visible Scale[ 1:1000000..1:75000 ] Query[ HIERARCHY\_CODE = 30

☒ Ignore shape parameters


OK Apply Cancel Wizard ...




**Vector: BNE\_FEATURE**

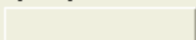
Layer Section Renderer Line Area Marker Label

Marker Outline Smart size

Style: TRIANGLEDO\ Size: 6.0pt Color: 

☐ Use renderer ☐ Use renderer

Bitmap:  Pattern: SOLID


Symbol:  Symbol Rotate: 0

☐ Include in legend

Visible Scale[ 1:10000.. ]

☒ Ignore shape parameters

OK Apply Cancel Wizard ...



## Label Tab

The Label tab provides a number of settings to control what information is presented and how each label appears as far as size, colouring, outline, font etc.

<b>Width</b>	Maximum label length. Should be set to a value that is likely to present sufficient information contained by the selected attribute.
<b>Height</b>	Maximum label height.
<b>Color</b>	The background colour of each label.
<b>Use Renderer</b>	If checked, the label colours are rendered based on settings in the <i>Renderer</i> tab.
<b>Bitmap</b>	Provides a mechanism for placing symbols or images as labels.
<b>Pattern</b>	Provides a mechanism for placement of a background pattern inside the labels.
<b>Font</b>	Option to control the font, colour, size, bold face, underlining and other options relating to the presentation of label text.
<b>Field</b>	Used to select the attribute from which information is to be presented in the labels.
<b>Value</b>	<p>Allows a formula to be specified in order to provide complex labels with multiple fields or HTML.</p> <p>Multi-Field values start with the ":" character and are formatted as follows:</p> <p style="padding-left: 40px;">:any text&lt;[specifier]:[field_name]&gt;any text</p> <p>eg.</p> <p style="padding-left: 40px;">:Site:\n&lt;25S:SITE_NAME&gt;\nArea:&lt;8.2F:SITE_AREA&gt; sqm</p> <p>Valid HTML markers are tags like:</p> <p style="padding-left: 40px;">&lt;B&gt; &lt;STRONG&gt; &lt;I&gt; &lt;U&gt; &lt;BR&gt; &lt;HR&gt; &lt;FONT&gt; &lt;NBSP&gt; &amp;amp; &amp;lt; &amp;gt; &amp;nbsp;</p> <p>eg.</p> <p style="padding-left: 40px;">{Name}&lt;hr&gt;&lt;b&gt;{LocalTime}&lt;/b&gt;</p>
<b>Include in legend</b>	Determines whether or not the label style will appear in the Legend panel.
<b>Visible</b>	Controls whether or not labels should be displayed for the selected section.

**Vector: BNE\_ROAD**

Section | **Renderer** | Line | Area | Marker | Label | Chart

**Label** | Outline | Smart size | Position

Width: 75.0pt | Height: 75.0pt | Color: [ ]

☐ Use renderer

Bitmap: [ ] | Pattern: TRANSPAREN | Font: Arial

Field: STREET\_NAME | Value: <:STREET\_NAME> <:STREET\_

☐ Include in legend  
☒ Visible

Visible Scale[ 1:10000.. ]  
 Visible Scale[ 1:10000.. ] Query[ HIERARCHY\_CODE = 301 ]  
 Visible Scale[ 1:10000.. ] Query[ HIERARCHY\_CODE = 302 OR HIE  
 Visible Scale[ 1:10000.. ] Query[ HIERARCHY\_CODE = 304 ]  
 Visible Scale[ 1:10000.. ] Query[ HIERARCHY\_CODE = 305 ]  
 Visible Scale[ 1:75000..1:10000 ] Query[ HIERARCHY\_CODE = 301 ]  
 Visible Scale[ 1:75000..1:10000 ] Query[ HIERARCHY\_CODE = 302 ]

☒ Ignore shape parameters

OK | Apply | Cancel

Wizard ...

The Label/Outline sub tab provides settings to turn on/off and control the appearance of label outlines. The Label/Smart size provides a setting to turn off labels at any given zoom level for any shapes rendered less than a specified size. Use of this feature can result in faster map rendering and reduce map clutter.

The Position sub tab provides settings to control the positioning of labels relative to the location of the associated shape. This includes the 'Follow' feature which positions labels parallel to line features and automatically repositions each label for the best position relative to the line after each map move. This tab also includes settings to preclude overlapping labels and duplicate labels with line features.

If multiple sections are in use, the label set up must be performed separately for each section. Ensure that the correct section is highlighted in the box at the bottom of the Label tab when entering the label set up.

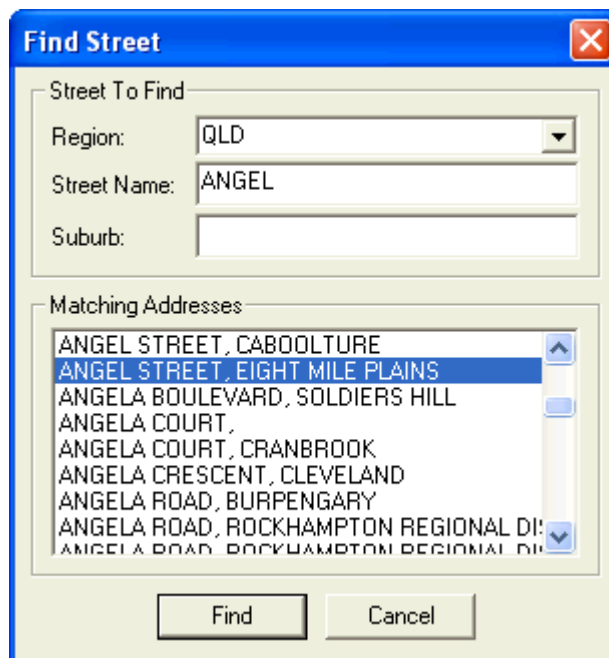
## Finding Streets

Select the **Find Street...** item from the **Tools** menu or click on the  button on the toolbar.



The 'Find Street' dialog box has a title bar with a close button. It contains two main sections. The first section, 'Street To Find', includes a 'Region:' dropdown menu, a 'Street Name:' text input field, and a 'Suburb:' text input field. The second section, 'Matching Addresses', is a large empty list box. At the bottom are 'Find' and 'Cancel' buttons.

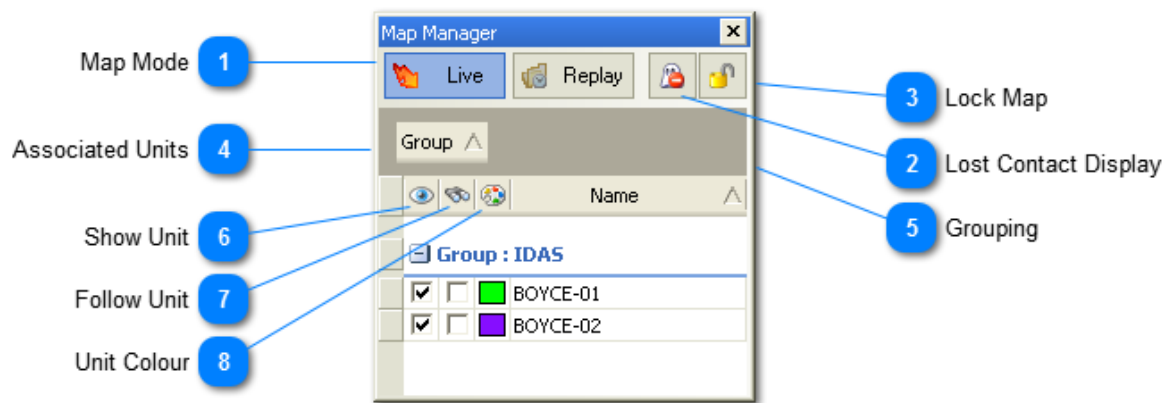
First select the **Region** from the drop down list and then enter in the **Street Name** you are looking for eg. ANGEL ST and click **Find**. If there is only one match then the map will be automatically updated otherwise if there are multiple matches then the **Matching Addresses** list will be populated.



The 'Find Street' dialog box is shown with the 'Region' dropdown set to 'QLD' and the 'Street Name' field containing 'ANGEL'. The 'Matching Addresses' list is now populated with the following items: ANGEL STREET, CABOOLTURE; ANGEL STREET, EIGHT MILE PLAINS (highlighted); ANGELA BOULEVARD, SOLDIERS HILL; ANGELA COURT, CRANBROOK; ANGELA CRESCENT, CLEVELAND; ANGELA ROAD, BURPENGARY; ANGELA ROAD, ROCKHAMPTON REGIONAL DI; and ANGELA ROAD, ROCKHAMPTON REGIONAL DI. The 'Find' and 'Cancel' buttons are at the bottom.

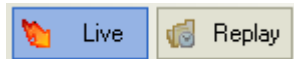
Once you have found the appropriate item in the list either double click on it or select it and click on **Find** to recentre the active map on the selected street.

## Using the Map Manager



Each workspace you have open during a RevViewer session has its own Map Manager window. The window contains several options governing the map mode and which units are displayed. Whilst it is possible to 'float' each Map Manager window, it is strongly recommended that they be docked to their respective windows and either closed or auto-hidden if space is an issue. Doing this will help reduce confusion when multiple map windows are left open.

### 1 Map Mode



When a map is in Live mode, only the current position of each unit is displayed. If you want to see historic positions that have been loaded in the Replay Controller, switch to Replay mode and ensure that the unit(s) in question has been associated with the map you wish to replay on. If you have multiple maps open then each map can be controlled independently.

### 2 Lost Contact Display



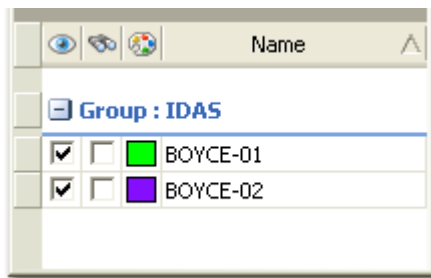
The Lost Contact option can be toggled to control whether or not units that we have lost contact with will be displayed on the map at their last known position. The image displayed with the 'forbidden' symbol over the ghost indicates that lost contact units will NOT be shown.

### 3 Lock Map

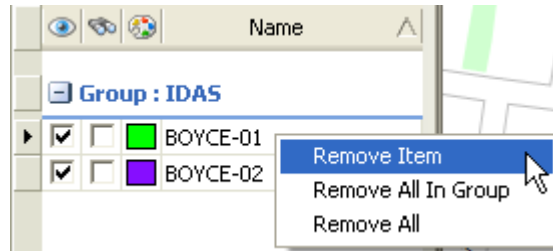


The Lock Map option can be toggled to lock the map with its current extents. When locked, the map cannot be zoomed into or out nor panned around using the standard tools. This can be useful if you want to monitor a site / yard and don't want to worry about accidentally adjusting the display by interacting with the wrong window.

### 4 Associated Units



The Associated Units grid contains a list of all units that are associated with the map. Apart from the controls detailed in subsequent sections, the grid also has a right click option that will bring up the menu below if a unit is right clicked on:



As the menu items suggest, various options are available for disassociating units from the workspace ie. the item itself, all items in the Group the selected item is associated with or all items in the grid.

5

### Grouping



By default the Map Manager will display all associated units grouped by their Fleet Group name.

6

### Show Unit



The checkboxes in this column control whether or not the unit is shown on the map. By default this box will be ticked (meaning the unit will be shown) when a unit / group is associated with the map.

7

### Follow Unit



The checkboxes in this column control whether or not the unit will be followed. When the Follow box for a unit is ticked, any time a new position is received for that unit the map will be updated to ensure the unit remains visible.

8

### Unit Colour



This column simply shows the default colour of the associated unit. If particular event conditions have been activated for the unit (eg. Proximity, Stationary, Lost Contact, etc) then the relative event colour will be used instead.




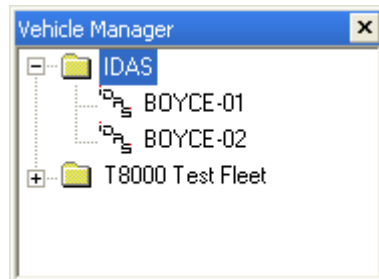
---

## Vehicle Manager

## Vehicle Manager Overview

All devices that will be used in conjunction with Reveloc Viewer are available from the Vehicle Manager list. Details for each Fleet and its vehicles are stored in a database on the server and can only be modified from within the Reveoc Administrator.

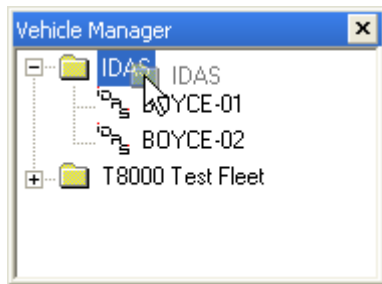
The Vehicle Manager is a docking window and can be accessed from either the  toolbar button or from the **Vehicle Manager...** item on the **View** menu. An example of this dialog is shown below.



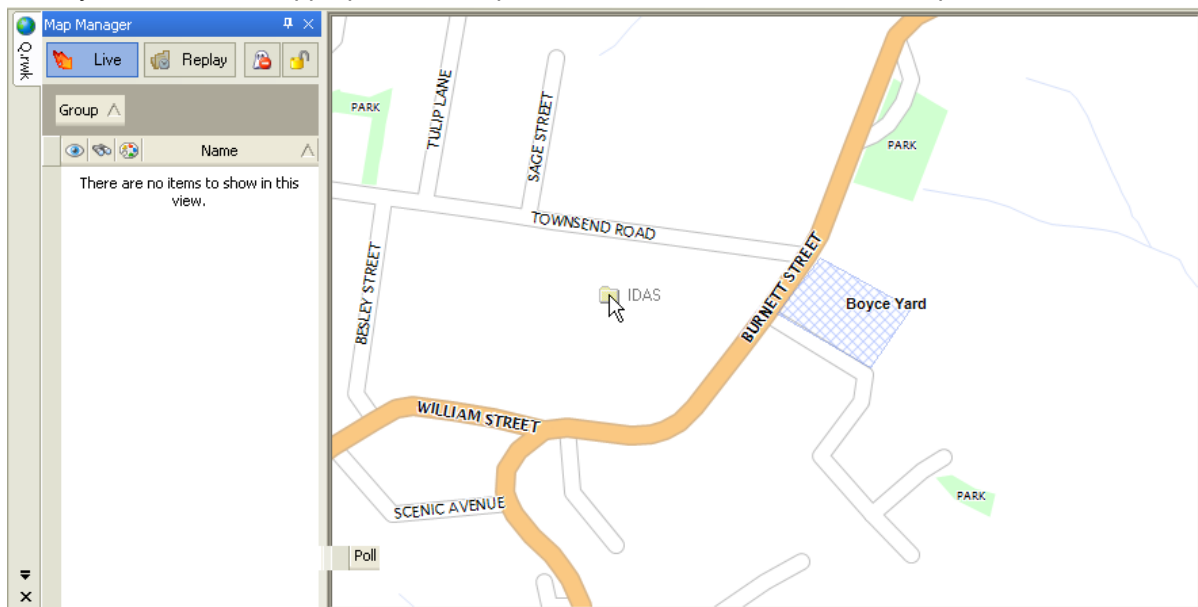
## Fleet / Workspace Association

In order to display positions for a vehicle on a map, you must first associate the vehicle's fleet with the appropriate Workspace. This can be done as follows:

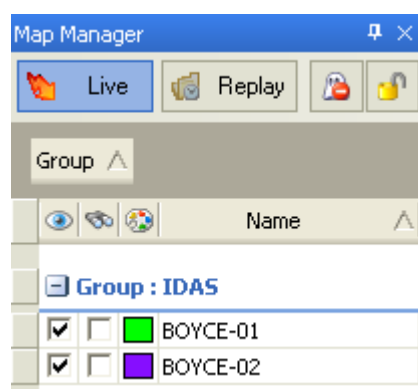
1. Make sure you can see the Vehicle Manager window and the workspace you wish to associate the Fleet with.
2. Find the Fleet containing the vehicle you wish to associate with a workspace.
3. Click on the Fleet in the Vehicle Manager and while still holding down the left mouse button, start dragging it toward the appropriate workspace. The cursor should change to a ghosted image representing the Fleet you have selected (see the example below).



4. Once you are over the appropriate Workspace release the mouse button to drop the Fleet onto it.




The fleet should now appear in the list of vehicles associated with the Workspace's Map Manager. Please note that individual vehicles can be associated with a map in a similar manner.

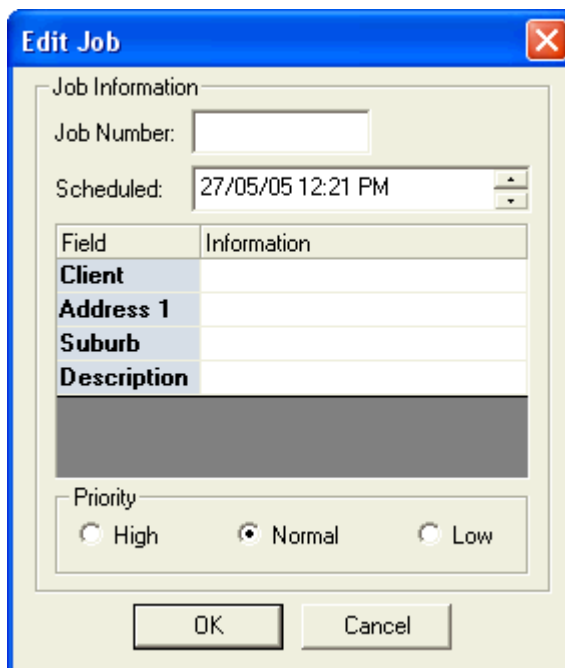


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## **Job Dispatch**

## Adding Jobs

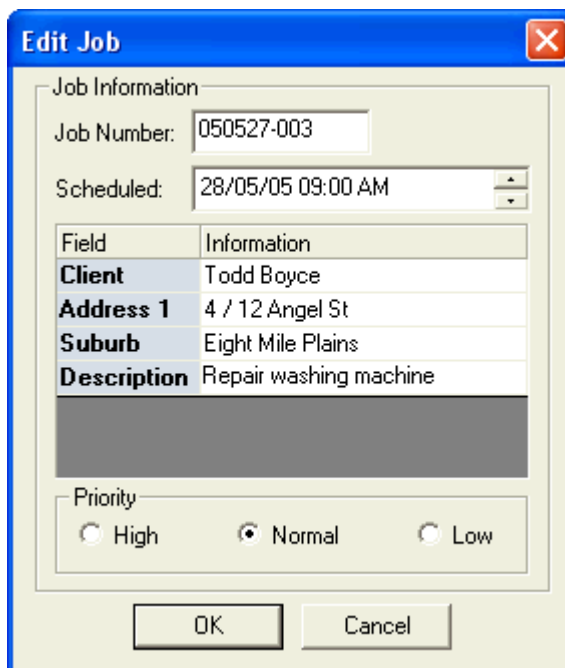
Select the **Place Job** item from the **Tools** menu or click on the  toolbar button. The Edit Job window should now appear (the Field names fields shown below are purely for demonstration purposes and can be configured from with the Reveloc Administrator program).



The 'Edit Job' dialog box is shown with the following fields:

- Job Information**
  - Job Number:
  - Scheduled: 27/05/05 12:21 PM
- | Field              | Information          |
|--------------------|----------------------|
| <b>Client</b>      | <input type="text"/> |
| <b>Address 1</b>   | <input type="text"/> |
| <b>Suburb</b>      | <input type="text"/> |
| <b>Description</b> | <input type="text"/> |
- Priority**
  - ☐ High
  - ☒ Normal
  - ☐ Low
- Buttons:** OK, Cancel

Enter in a unique job number (up to 20 alpha and / or numeric characters) and then fill in each of the fields as appropriate.



The 'Edit Job' dialog box is shown with the following fields filled:

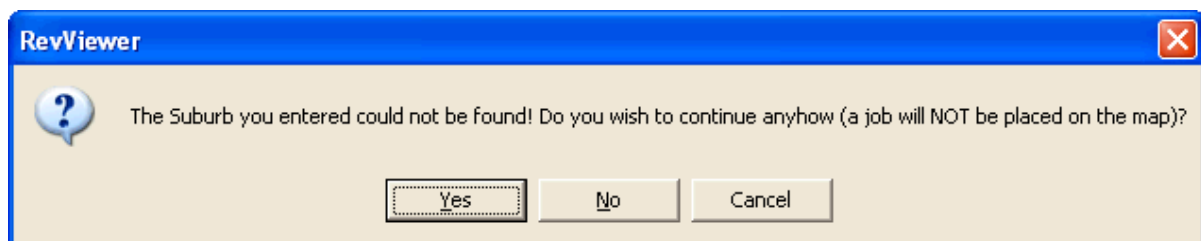
- Job Information**
  - Job Number: 050527-003
  - Scheduled: 28/05/05 09:00 AM
- | Field              | Information            |
|--------------------|------------------------|
| <b>Client</b>      | Todd Boyce             |
| <b>Address 1</b>   | 4 / 12 Angel St        |
| <b>Suburb</b>      | Eight Mile Plains      |
| <b>Description</b> | Repair washing machine |
- Priority**
  - ☐ High
  - ☒ Normal
  - ☐ Low
- Buttons:** OK, Cancel

Click on **OK** to enter the job in to the system. A new line should appear in the Job Summary window and a symbol placed on the map at the centre of the locality. Jobs in the Summary are coloured according to priority: Red for High, Black for Normal and Blue for Low. The colour of the job symbol that gets placed in the map will also be determined by its priority but will be determined from settings on the server.

Jobs							
Job ID	Scheduled	Entered By	Allocated To	Client	Address 1	Suburb	Description
▶ 050511-001	11/05/05 8:42:00 PM	Todd Boyce		A	B	Runcorn	Test
050511-002	11/05/05 8:47:00 PM	Todd Boyce	Todd	C	D	Kuraby	Test
050511-003	11/05/05 8:50:00 PM	Todd Boyce		A	C	Rochdale	Test
050511-004	11/05/05 9:18:00 PM	Todd Boyce		A	B	Macgregor	
050513-001	13/05/05 1:36:00 PM	Todd Boyce		T	D	Eight Mile Plains	Test
050527-003	28/05/05 9:00:00 AM	Todd Boyce		Todd Boyce	4 / 12 Angel St	Eight Mile Plains	Repair washing machine




As you can see from the illustration above, the Job ID is used as the label on the map. If the locality (Suburb) cannot be found then you will see a message similar to the one below:

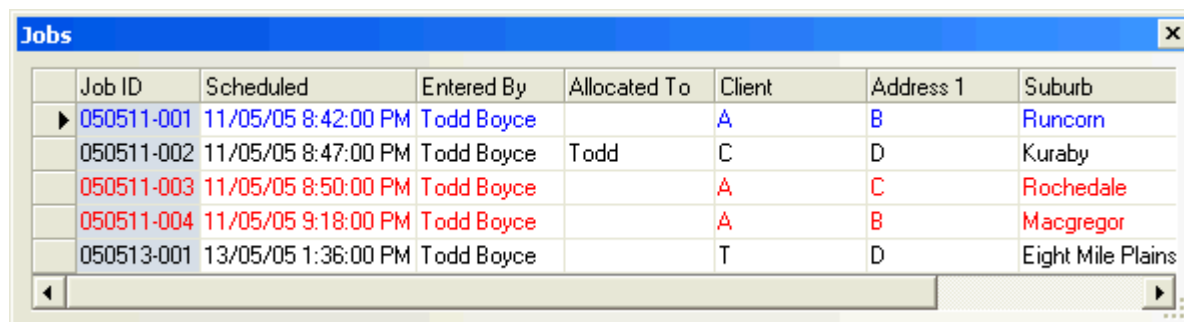


At this point you can either click on Yes to continue without placing a Job, click on No to abort the Job adding process or Cancel to go back to the Edit Job screen and check the spelling of the locality.

## Job Summary

The Job Summary contains a gridded list of all of the unallocated jobs that are stored in the database on the server.

It can be displayed by selecting the **Job Summary** item from the **View** menu or by clicking on the  toolbar button.



Job ID	Scheduled	Entered By	Allocated To	Client	Address 1	Suburb
050511-001	11/05/05 8:42:00 PM	Todd Boyce		A	B	Runcorn
050511-002	11/05/05 8:47:00 PM	Todd Boyce	Todd	C	D	Kuraby
050511-003	11/05/05 8:50:00 PM	Todd Boyce		A	C	Rosedale
050511-004	11/05/05 9:18:00 PM	Todd Boyce		A	B	Macgregor
050513-001	13/05/05 1:36:00 PM	Todd Boyce		T	D	Eight Mile Plains

The grid contains several fixed columns (Job ID, Scheduled, Entered By and Entered On) along with one or more columns as configured by the Reveloc Administrator.

The grid has a right click menu attached to the Job ID cell from which a number of options can be taken.

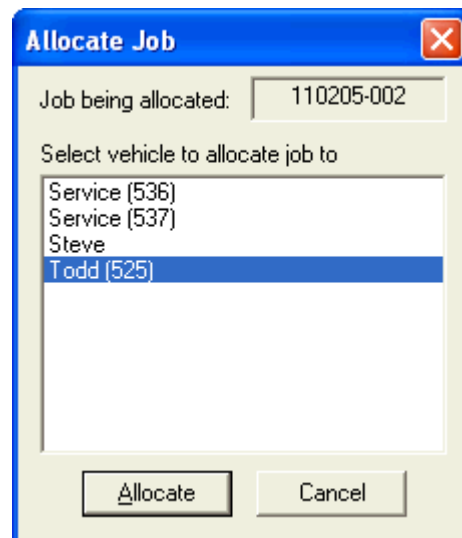


- Edit Job** Allows the user fields associated with the job to be edited (Job ID cannot be edited).
- Delete Job** Allows a job to be deleted from the list eg.if the client cancels the appointment.
- Zoom To Job** Recentres the active map on the selected job. This can also be achieved by double clicking the left mouse button on the appropriate row.
- Allocate Job** Allows a job to be allocated to an active vehicle (see below)
- Deallocate Job** Allows a job to be deallocated from its associated vehicle. This option is only available for allocated jobs which have not been confirmed by the driver with an appropriate status message.

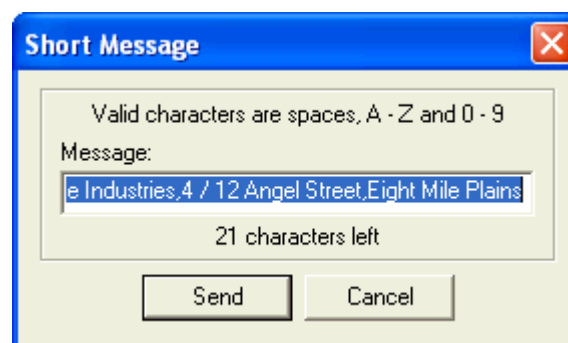


## Job Allocation

Jobs can be allocated by right clicking the mouse button on the appropriate Job Number and selecting the Allocate Job item from the popup menu. A small window, like the one below, will then appear. Simply select the vehicle to allocate the job to from the list and click on the **Allocate** button (or just double click on the vehicle name).



The Short Message window will then appear with the appropriate Job details as the default message text eg.



Each section up to the next comma will be sent as a separate message. Bear in mind that a maximum of five messages of 25 characters each can be received by the mobile radios.

Once you are happy with the message text click on the **Send** button.


050511-004	11/05/05 3:18:00 PM	Todd Boyce	A	B	Macgregor
050527-003	28/05/05 9:00:00 AM	Todd Boyce	Todd	Todd Boyce	4 / 12 Angel St Eight Mile Plains Repair washing machir

The allocation request will be sent to the server and the row for the job in the summary window coloured differently until the allocation has been confirmed by the driver. Once confirmed the item will be removed from both the list and the map.

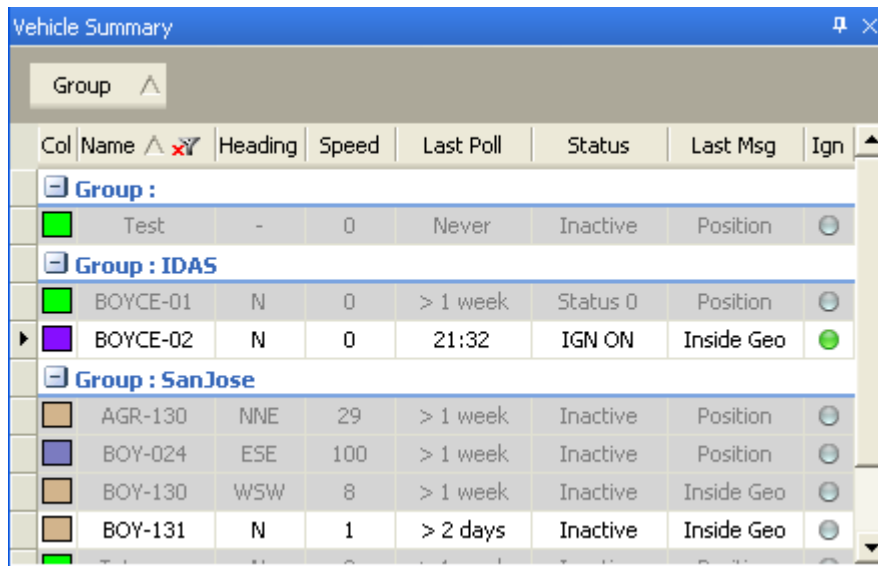
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## Display Summarys

## Vehicle Summary

A brief summary of the status of each active vehicle can be displayed by clicking on the  button of the toolbar. The layout of this window is dependent on a combination of the Event settings configured by RevAdmin and grid settings that may have been previously updated.

When not using user defined events, the window will look similar to the one below.

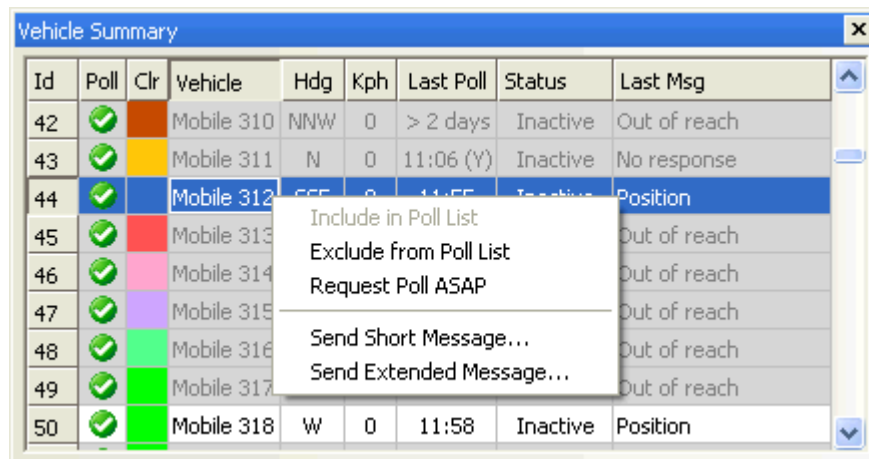


Col	Name	Heading	Speed	Last Poll	Status	Last Msg	Ign
<b>Group :</b>							
	Test	-	0	Never	Inactive	Position	
<b>Group : IDAS</b>							
	BOYCE-01	N	0	> 1 week	Status 0	Position	
	BOYCE-02	N	0	21:32	IGN ON	Inside Geo	
<b>Group : SanJose</b>							
	AGR-130	NNE	29	> 1 week	Inactive	Position	
	BOY-024	ESE	100	> 1 week	Inactive	Position	
	BOY-130	WSW	8	> 1 week	Inactive	Inside Geo	
	BOY-131	N	1	> 2 days	Inactive	Inside Geo	

Units can be displayed in their Fleet Groups or as a single alphabetic list sorted by Name. Other columns that are commonly displayed show information like last known speed, heading, status and time of the last position. A full list of columns that can be shown / hidden is available by right mouse clicking on a column header and expanding the **Columns** option.

## Vehicle Summary Commands

A number of commands are available from the Vehicle Summary panel via a right mouse click menu.



### Polling

- Include in Poll List** If not already included this option will add the vehicle to the poll list.
- Exclude from Poll List** If already included in the poll list this option will remove the vehicle from it.
- Request Poll ASAP** A poll request will be placed in the RevAdmin queue to be processed as soon as the appropriate base device becomes available.

### Messaging

Provided that the base device and network infrastructure support a short messaging service, text messages can be sent to vehicles via the Vehicle Summary window.

- Send Short Message...** Use for messages up to 25 characters in length.
- Send Extended Message...** Use for sending longer messages where supported. Character limit depends on mobile hardware.

Once a **Short Message** option is selected, a message entry window will be displayed. From this window a new message can be sent (and saved to the list of predefined messages via the disk icon) or a predefined message selected and edited before being sent. Messages in the Predefined list can be removed by highlighting the appropriate entry and pressing the cross button.



A screenshot of a 'Short Message' dialog box. The dialog has a blue title bar with the text 'Short Message' and a close button (red X). Inside, there is a section titled 'Predefined Messages' containing a list box with three items: 'Go to load location x', 'Head to Wetherill Park', and 'Return to base'. To the right of the list box are two buttons: a red X button and a floppy disk icon button. Below the list box is a text input field with the label 'Message:' and a hint text 'Valid characters are spaces, A - Z and 0 - 9'. Below the input field is a status bar that says '25 characters left'. At the bottom of the dialog are two buttons: 'Send' and 'Cancel'.

Short Message

Predefined Messages

- Go to load location x
- Head to Wetherill Park
- Return to base


Message: Valid characters are spaces, A - Z and 0 - 9

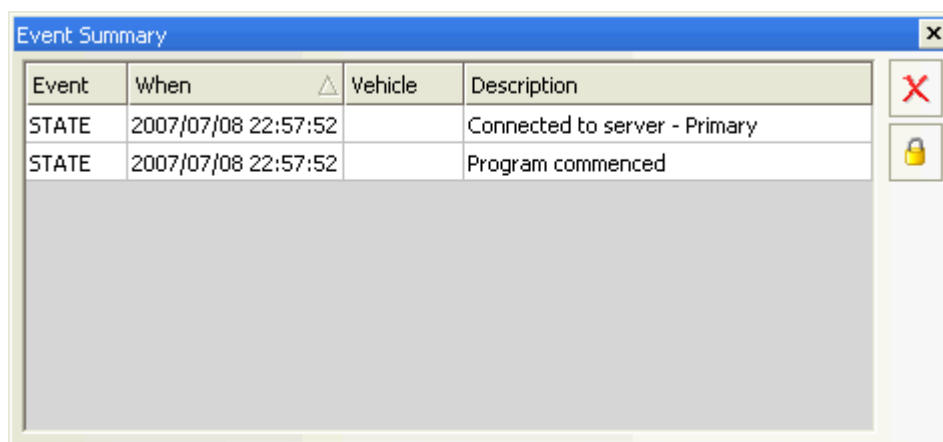
25 characters left

Send Cancel


## Event Summary

The Event Summary window contains a time stamped list of "events" that have occurred since program commencement.


It can be displayed by selecting the Event Summary item from the View menu or clicking on the  toolbar button.



Please note that the event grid is only designed to retain the five hundred most recent events. Once this limit is reached, the first fifty items are deleted.

All items can also be deleted by clicking on the  button.

By default the Event Summary automatically scrolls so that the most recent event is always visible in the grid. If

you wish to scroll back and view past events then click on the lock button  to change the state so that scrolling is enabled. Once you have finished reviewing the events simply click on the button to reautomate the recent event tracking.

Types of events:

<b>STATE</b>	Program Commencement, Server Connection / Disconnection.
<b>EVENT</b>	Lost Contact, Speeding, Proximity and Stoppage alerts.
<b>ALARM</b>	Reserved for future use.
<b>NOTIFY</b>	Refresh events generated from the server for jobs, vehicles etc
<b>ATTN</b>	These events are coloured red and indicate a failure has occurred that may require attention eg. Sending Job details fails.
<b>REQUEST</b>	Requests made to the server for job allocation and messaging.

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## Message Summary


Under Development

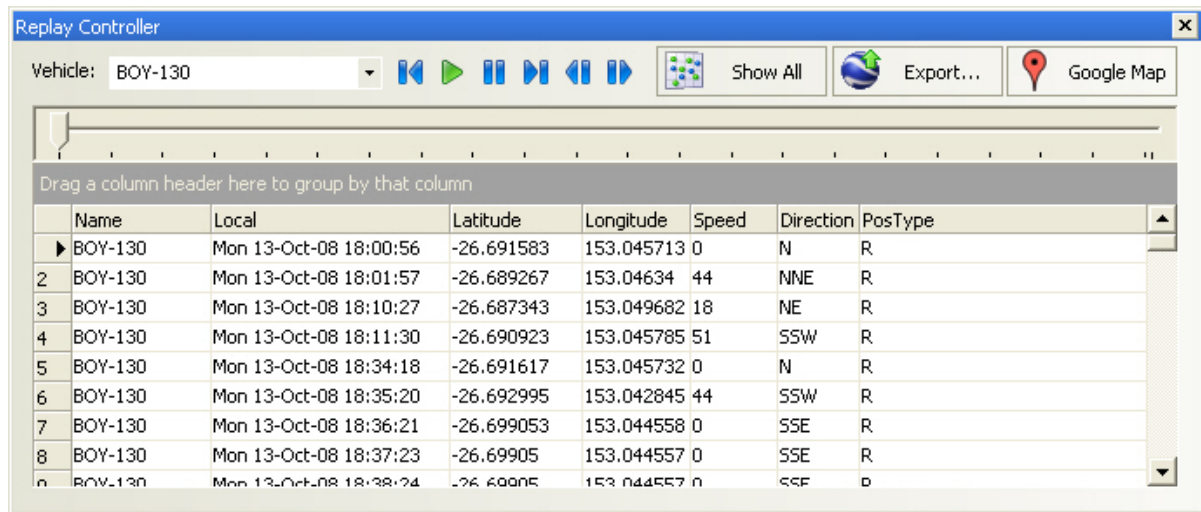
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## Track Analysis



## Replay Controller

Once historical information has been retrieved either from the database or log files, it can be reviewed using the **Replay Controller**. The display of the controller window can be toggled via the Replay Controller button .



The image above shows the various components of the Replay Controller including controls as follows:

**Vehicle Drop Down** If multiple vehicles are loaded then the drop down allows the grid to be filtered by either one or all vehicles.



Move the current position back to the start of the grid.



Automatically step through the grid.



Stop stepping through the grid.



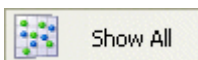
Move the current position to the end of the grid.



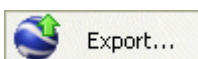
Move the current position to the previous grid row.



Move the current position to the next grid row.



Show all loaded grid positions for the specified vehicle(s) on any maps in Replay mode that have the vehicle(s) associated with them.



Export all loaded grid positions to a kml file for use in Google Earth.



Display the current position on a Google Map in the current system's web browser.

**History Slider** Simple slider control for fast navigation to a particular grid row.

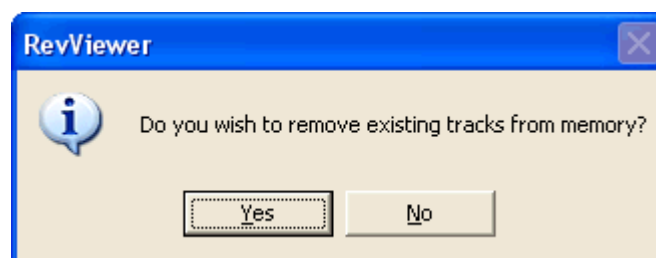
**History Grid** Grid of historic positions with more detailed information on each point.

**Note:**

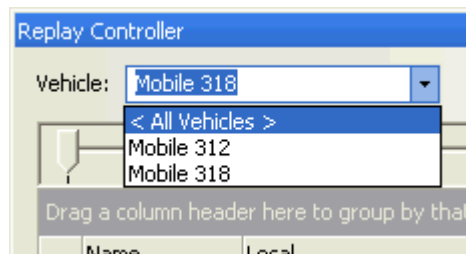
1. The Allow Vehicle Trails option must be ticked in order to view a trail of points.
2. The local time is calculated based on the local PC's time zone setting.
3. Where a vehicle has position information that contains a number of satellites, its symbols will have a black border when the number of satellites is greater than or equal to four. Readings with less than four satellites will be coloured with a white border.

**Loading Multiple Log Files**

If you want to review multiple log files simultaneously simply load each file one by one and select **No** when the prompt (displayed below) appears.



Once loaded, all data will be sorted chronologically for each vehicle. There is also an option to follow the progress of all vehicles in chronological order as indicated below.



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**Alerting / Monitoring**

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## Emergency Alerts

If RevViewer is to be used for emergency purposes then a number of configuration steps that are not a part of the normal user interface need to be performed.

By default when an SOS is received from RevAdmin and RevViewer is set to require operator responses, the screen will flash red and the details of the alerting vehicle will be displayed. This visual alert can be supplemented with an audible one as well as the display of an Emergency Procedure document when the alert is acknowledged. This can be set up as outlined below. Please close RevViewer before making the changes.

1. Locate a **wav** file that you wish to use for the alerts. Please ensure its duration is around 3 seconds or less as it is designed to be looped on a regular interval.
2. Create an **rtf** document you wish to use for the Emergency Procedure.
3. Copy the files to the folder where RevViewer is installed.
4. Using Notepad or a similar text editor, open the **RevViewer.ini** file located in the Windows folder.
5. Navigate to the **[Configuration]** section.
6. Find the **AlertFile=** entry and type in the full path to the wav file eg.  
AlertFile=C:\Program Files\Boyce Industries\RevViewer\Siren.wav
7. Now find the **ProcedureFile=** entry and type in the full path to the rtf file eg.  
ProcedureFile=C:\Program Files\Boyce Industries\RevViewer\Emergency.rtf
8. Save the ini file and close NotePad

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## Contact Us

Please direct all initial correspondence and support requests to the dealer you purchased your system from. If you need to contact us directly then please use the contact information below.

Emailing support is the preferred method of contact.



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